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THE SOUTHERN PLANTER

VOL. 66

No. 1



THE LEADING
AGRICULTURAL
JOURNAL
OF THE
SOUTH

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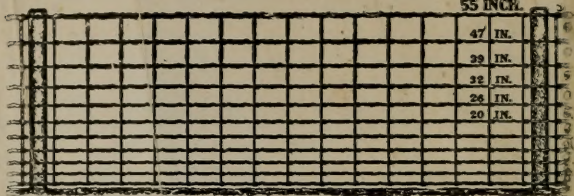
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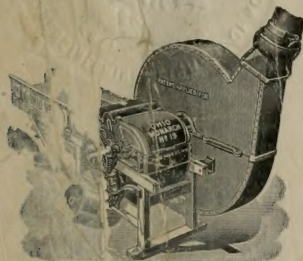


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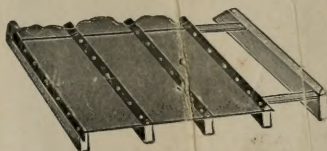
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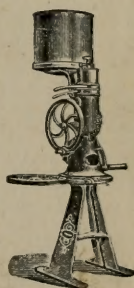
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

66th Year.

Richmond, Va., January, 1905.

No. 1.

1905.

A happy and prosperous New Year to all readers of THE SOUTHERN PLANTER.

In accordance with our established custom we have the pleasure once again of issuing a special edition of the old journal, now in its 66th year of publication, to greet the New Year. In the past we have had an enormous demand for these special issues and they have proved the means of introducing THE PLANTER as a regular monthly visitor into thousands of farmers' homes throughout the South. We anticipate that this will be again the case, and to meet the need, have printed a large extra edition of this issue. We shall be pleased to send copies of the number to all who may ask for the same, either for themselves or their neighbors, and shall esteem it a favor if our subscribers will bring this fact to the attention of their friends and also send us the names and post-office addresses of the substantial and progressive farmers of their section who may possibly be induced to take the journal. To these we will send copies of the journal with our special offers to new subscribers.

In the past five years the addition to the list of our regular subscribers has been phenomenally large. We are looking to see this repeated, as only by this means can we hope to continue to make the journal bigger and better. Whilst our contract with our subscribers only calls for a journal of 50 pages each issue, or 600 in the year, we have in the past year given them a volume of 856 pages, or over one-third the number of pages in excess of our contract. We

desire to see our subscribers at least as generous in their appreciation of our efforts as we have shown ourselves to be of their interests. With very little effort on the part of each subscriber we could double our list. There is not a reader of THE PLANTER who could not send us in at least the name of one new subscriber, and many could send us in a score. Will you not make one of these to help us? Not a day passes that we do not receive letters commending the work which THE PLANTER is doing and admitting that more valuable information is got from each issue than could be obtained elsewhere for many times the amount of the annual subscription. Because this is so we have never discounted the price of THE PLANTER by offering premiums to those who want to take it. Each issue of the journal costs us every cent that we ask our subscribers to pay for it. To give something with the issue means either that we must lose money or make some one else pay more than he ought to do for what we do for him, and neither of these propositions can commend itself to a business man. We believe that "every tub should stand on its own bottom," and, therefore, that each subscriber should at least pay the actual cost of the production of the issues. Where subscribers desire to take other publications along with THE PLANTER we can make a substantial reduction on the price of the combined papers. This we are enabled to do because of concessions made by the publishers of the other journals, many of which are published at much higher prices than this journal, and have, therefore,

a larger margin of profit on which to work. When we reduced the price of *THE PLANTER* from \$1.00 per year to 50 cents we recognized that this policy would handicap us in making reductions in price or in the offering of premiums, but we believed that at the low price of 50 cents we should receive thousands of subscribers, who hesitated to pay \$1.00 per year for reading matter, even though that matter vitally concerned their progress in life, and this has proven to be the case. Where we had then hundreds of subscribers we now have thousands. The backward condition of education in the South at that time made appreciation of the value of reading matter very low, and this, coupled with the old prejudice against "book farming" which largely pervaded this section, made thousands content with ignorance of the best methods of farming, when they should, in their own interest, have been most discontented. To a large extent these conditions have been surmounted. Education is now being more appreciated every day and the facilities for securing the same have been greatly augmented. Farmers have come to realise that "book farming" is, when properly taught and understood, essential to progress and profit. Where the teaching of the book or journal is solely theoretical and not based on actual practical experience and ascertained facts, then it is largely valueless, but when, as is the case with *THE PLANTER*, the teaching is that of science, coupled with practical application, and this enforced and illustrated by the guiding hand and trained intelligence of an editor who has spent the greatest part of a fairly long life on the farm and in the elimination of the problems confronting every farmer, then such "book farming" is of primary importance to the well doing of every one who is striving to make a living and something over out of the land. The contents of this issue are an illustration of these truths, and this issue is but a sample of what every issue in the year will be. Herein will be found articles from some of the foremost teachers of scientific agriculture in the world, men who have proved on the experiment farm what they teach in these pages, and whose work has added millions to the wealth of the farmers of the country. These men are regular contributors to the columns of this journal each month, and their articles alone in the course of a year are worth to every practical farmer ten times the cost of the journal. Again, in this issue will be found articles from men whose sole business is that of farming, and who are drawing from their experiments and practise, lessons which cost them money and labor, which they are giving to their brother farmers, through our columns, with a

generous hand, with the view of saving them the cost of learning by the expenditure of time, money and labor on their own farms. Many of these are amongst the most successful farmers and live stock men in the country, and we appreciate what they are doing warmly and thank them for their co-operation. To these contributors must be added the work of the editor, who in the articles on "Work for the Month" and the "Enquirers Column," and in other contributions, gives the benefit of his own scientific training and practical work on the farm. Probably the most characteristic feature of *THE PLANTER* as distinguished from many other so-called agricultural journals, is that nearly the whole matter published in each issue is original work, designed to help the farmers in a particular section of the country where its circulation is largely confined to. We use no "syndicated matter," and no "scissors and paste" in making up our agricultural columns, and we do not seek to teach the farmers of the whole United States. This country is too large and its climate and soil conditions too varied to make it possible for a journal to do justice to more than a section of it. "Syndicated matter" is necessarily general in its teaching in order to endeavor to make it circulate over a wide area of the country. Such teaching is, in our opinion, not what the farmer wants. He takes a journal to help him in his own particular work and in his own particular section, and matter that has no bearing on what he is doing, or what he can do, is in reality of no practical value to him. This sort of matter we find reprinted in journals all over the country, most of these being sold at a very low price. They are dear at any price to the practical farmer who needs help in his own particular work, as they usually contain but the very smallest modicum of teaching which he can practice or use. We avoid this feature by requiring that what appears in our pages shall be applicable certainly to the South Atlantic States, however useful and instructive it may be to farmers elsewhere. This feature has in the past largely conduced to the popularity of *THE PLANTER* in these Southern States, and it will be our constant endeavor in the future to "hew to this line," whatever else we may do. The readers of *THE PLANTER* in these Southern States may, therefore, always confidently rely upon what they find in the journal being applicable to their conditions and surroundings. With increased support we hope in the future to make *THE PLANTER* even more necessary than it has been in the past to Southern farmers, and we confidently ask them in return to give us the help we seek at their hands.

Farm Management.

WORK FOR THE MONTH.

In our last issue we reviewed the results of last year's work on the farms of the South and demonstrated that on the whole Southern farmers had reason to be fairly satisfied with the outcome of their labors. Since that review was written the Government report on the probable yield of the cotton crop for the year has been received and as this so greatly exceeds what was expected, amounting to over 12,000,000 bales, there has been a heavy fall in the market price of the staple. This will, of course, seriously affect the planters all through the South and make the results of their year's work much less satisfactory. We would urge on them that they exercise discretion in marketing the balance of the crop, only selling when compelled to do so to meet maturing obligations. If this policy be pursued systematically we are satisfied that even yet a fair price will be realized, as the world's demand for the crop is a large one, not yet nearly satisfied. With good crops of corn and plenty of feed for the stock there ought not to be the need for sacrificing the cotton crop. Planters should take warning from their experience this season, and in many past years, and not repeat the mistake of planting an excessive acreage in cotton this year. Plan to raise more corn and feed for the hogs and stock and more peas for improving the land. These, whilst not all bringing immediate cash returns like cotton, will give the means for feeding the family and stock and for making the land more productive, and in the long run make the grower a more independent and richer man.

Since writing our article, "Work for the Month" in the December issue, this State, and parts even of States further South, has been visited by severe winter weather, with a heavy fall of snow, amounting to as much as 6 inches in many parts. At this writing (December 17) this snow still covers the ground, and there are indications for a further downfall. This weather is almost unprecedented at this time of the year in this State—only once before in a long series of years have we had so much snow in December. The temperature also has been very low, going down to 12 above zero. Whilst some snow in December and January is usually looked for and welcomed as a cover for the wheat and other winter crops yet this year we should have welcomed rain first instead of the snow. There has been an abnormal absence of rainfall for many months, and whilst here in Virginia we have not suffered from drouth, yet in

States further South and West this has not been the case. In Tennessee, West Virginia and Kentucky the drouth has been distinctly hurtful and is even now causing much loss from the absence of water for stock. This condition also appears to be prevalent not only in the South but as far North as New York State, and in some of the New England and Eastern States. In these Northern and Eastern States rainfall, unless long continued, would now do but little good, as the ground is too hard frozen to allow it to penetrate. Here if we could have rain it would soon get into the land, and it is much to be hoped that this will happen, as otherwise we are likely to go into another crop year with a great deficiency of soil moisture, and consequent probability of deficient crop yields. In the South it is essential to successful crop production that there should be a good reserve of moisture in the land at the opening of the crop year. Our hot weather comes on so early that in the absence of this crops are sure to suffer. Those who by deep and early plowing have conserved what rainfall we have had are distinctly advantaged and we would again urge that every opportunity possible should be availed of to push on this most needed work. In our last issue we wrote fully on the benefits to be derived from fall and winter plowing and commend this article to the attention of our readers. In this issue we say something on what good plowing means. Very much of that work done in the South falls far short of being good plowing. At best it too often merely amounts to a partial breaking of the land. From such work the best results cannot be attained.

The outlook for the farmer for the year now beginning is distinctly hopeful. Business is generally good and the people are fairly employed in all sections. This means a continued demand for the products of the soil at fair prices. We look to see no serious fall in prices of any staple products except it may be cotton. For wheat the outlook is for a maintenance of existing values which are considerably higher than for years past. We base this prediction on the fact that the seeding of winter wheat is below that of last year notwithstanding existing high prices. In Virginia 753,193 acres have been sown as against 765,852 acres in 1903. In very few States has more been sown than in 1903. The condition of the crop seeded is also much lower than in 1903 at the same time and ten per cent. below the 10 year average. If we should have a winter severe on the wheat crop we look to see a considerable re-

duction even on the present year's small crop of winter wheat. The crop of winter oats sown in the South so far as we can learn is smaller than usual. This has been caused by the dryness of the land which prevented plowing and seeding at the best time for getting in the crop. We look to see some advance in the price of beef and hogs. These two products have been forced down below the price at which they should normally have sold during the past year, based on the supply, by a combination of the packers. This cannot long continue in the face of decreased supply and good consumptive demand. Mutton and veal has been in good demand and prices have kept firm and high, and this we expect to see continued, as the prospective supply is not excessive. It is gratifying to see the demand for good mutton constantly on the increase. The American people are at last becoming a mutton eating people, and the outlook for sheep keepers is most cheering. Wool is selling at a better price than for years past and as the world's production is still much below what it formerly was, on account of the enormous decrease in the sheep stock in Australia by reason of the long continued drouth, we look to see this price maintained. We trust the effect of these two facts will be to cause a great increase in sheep husbandry in the South. We ought to have millions more sheep in the South than we have. We could feed these without decreasing in the least the numbers of other stock kept and they would put millions into the pockets of farmers, realized largely from land now producing nothing but taxes. With prospects like these before him the thing for the Southern farmer to do is to put himself in the way of producing larger crops and more live stock on a smaller area of land. The weakness of the Southern farmer is that he will persist in being an *extensive* farmer instead of an *intensive* one. He will persist in cultivating 500 acres when he is only in a position to do justice to 250. The labor difficulty seems, however, now to be likely to do more towards changing this habit than all we have said in the past or may say in the future. So long as he could get labor of any kind he would persist in planting more than he could manure or properly cultivate and care for. Labor is now becoming scarce and dear relative to its actual worth, and this is causing pause in the planting of large areas, and making it, in many sections, difficult to work even small ones. Good, in many ways, is going to come out of this condition of affairs. We are going to see heavier crops produced at much less cost on smaller areas. The margin of profit will be much larger and the

actual work required to be done much less. Improved modern machinery is going to take the place of the unskilled, thoughtless labor, and a higher type of laboring man is going to be employed. Coincident with this we shall see better work done and the burden of responsibility more evenly divided between the owner and the laborer. We strongly urge that farmers should look into this question of using modern machinery, and whilst not buying machines for which only a day or two's work in the year can be found, to buy such machines for their own use as can be kept at work sufficiently constantly to pay for the outlay. For machinery that is only likely to be required for a short period at different seasons, like threshing machines, corn huskers and shredders, and heavy cutting machines for filling the silo, farmers in a section should co-operate and make one set of machinery serve the needs of a whole community. With improved modern riding plows, cultivators, harvest rakes, drills and other implements at hand the farmer can feel himself very independent of the shiftless labor which is so often all that can now be had in many sections, and can make his crops at comparatively small cost for labor. These and better stock to convert the products into higher priced commodities than the unconverted staples from which they are produced, is to be the way out of the present difficulty, and the end will be more productive farms and richer farmers.

In the year now commencing we shall continue to give such help in the realization of this programme as we can by means of our articles on "Work for the Month" and the Enquirer's Column. We are constantly in receipt of letters from all sections commending these features of the journal, and the extent to which the Enquirer's Column is availed of by our subscribers is ample proof of its popularity. Let us have your questions as early in the month as possible so as to give us more time to reply to them. In many cases questions asked require considerable research to make complete answers, and unless we have time given to make these we cannot give such replies in time to meet the requirements of the enquirer. Every month we have to leave out unanswered some enquiries which have reached us too late, and which, if answered in the following month, will be too late to be of any service to the enquirer. We welcome all enquiries and will do our best to give intelligible and reliable replies. We are always glad to receive articles from farmers dealing with the production of crops and management of live stock and the handling and marketing of crops and stock. Whilst the pro-

duction of good crops and fine stock is the business of the farmer, it is not all his business by any means. The fitting of these for the market and the selling of them is of equal importance to success. It is in this latter work that many fail most miserably. Instead of knowing what is the cost of producing the articles he has to sell and fixing the price at which he can afford to sell them, he too often knows nothing of this, and leaves to the buyer the fixing of the price and then grumbles that "farming does not pay." Farmers need much to educate themselves on this question of cost of production, and to keep the proper books to enable them to arrive at correct figures. Not until they do so will they be able to hold their own against the combinations which fatten on the profits they make out of the labors of the farmers. Co-operation in selling will largely help to secure better prices and wider markets.

There is comparatively little that can be done out of doors this month, and especially will that be so if the present severe spell of weather continues. If it should moderate the work of plowing and clearing up land intended to be brought into cultivation should have attention. See that what is done is done thoroughly. Do not leave stumps and bushes and stones in the fields. They are constant sources of trouble and annoyance, breaking tools and implements and wasting land. They are also harboring places for injurious insect pests and fungoid diseases. Let the subsoil plow follow the plow wherever possible, and thus break up the hard pan which is so frequently found under the surface soil as the result of long continued shallow plowing and cultivation. In this way the soil is deepened and made fit to mix with the surface soil, and it will enable a reserve of moisture to be accumulated for the benefit of the summer crops which at present seems likely to be needed. When plowed and subsoiled give the land a dressing of lime, 25 to 50 bushels to the acre, and harrow this in lightly. This will in all probability do more to help in producing a good crop than fertilizer applied later. We have had some most satisfactory reports on the use of lime from nearly every section of the State. It tends greatly to the promotion of microbic life in the soil, and on this more than on fertilizer depends the productivity of land. The breaking of the subsoil will stop washing of the soil and enable gullied land to be brought again into profitable use.

We have numerous reports of failures of wells and springs never before known to go dry both in this and

adjoining Southern States. The same complaints we see are common in Northern and New England States. Efforts should be made to meet this difficulty by boring or driving deeper wells at once, so that when the summer comes, there may be no shortage of water for domestic use and for stock. In many cases it would be good policy to put in cisterns to store the water from the roofs of the buildings. These should be made of concrete, and then when once made properly will last forever. We will endeavor to publish a plan for making one of these cisterns in this issue or the next.

When the weather is fine and the land dry enough haul out manure and spread it on land to be cropped or use as a top dressing for wheat, oats or grass. When not used as a top dressing it will usually pay better on the corn crop than any other place. Don't let it accumulate in the yards and buildings longer than can be helped. It loses much of its value whilst thus accumulating unless kept packed tightly down under a roof.

Fill the ice house whilst there is opportunity, and see that an ample supply is laid in.

When the weather is too stormy for outdoor work clean, repair and paint up machinery, tools and implements and repair harness. Take note of all parts of machines that are worn and likely to break and have new parts ordered and on hand ready for a breakdown.

PLOWING.

In our recent issue and also in this one we have urged fall and winter plowing of land, and in our last issue wrote at some length on the reason why fall and winter plowing is especially beneficial to land in the South. We propose now to say a word on the subject of how plowing should be done. There is all the difference in the world in plowing. What we have advocated, and still advocate, is *good plowing*. What is mostly done in the South, we regret to say, is *poor plowing*; indeed, it is a misnomer to call a great deal of it plowing at all. A good old razor back hog would do much better work than much of that which is done if he could only be kept regularly at work in something like a methodic manner. Good plowing means that every inch of the land is not only turned over, but turned over in such a way that each foot of the land is broken the same depth

and broken to the same, or nearly the same, degree of fineness, and so laid as that when worked with the harrow or cultivator none of the vegetable matter turned under is disturbed and brought again to the surface, but left covered with a fine mulch of soil permeable to the rain, moisture and air, so that an equal opportunity is given to the whole of this matter to decay and become food for the crop, and that the whole of the plant food in the soil is subjected to the same influences, so that it may become equally available to the crop. Unless these conditions are all observed we can never secure an equal growth of the crop over the whole field, and unless this is secured the crop can never make the best return, as some part will get ahead of the other, making an uneven return in different parts of the field, and a sample uneven in quality, and hence never capable of being sold for the top price. This question of good plowing has never received the attention in this country which has been given it in England, and largely on this account our crops do not begin to compare with those grown in England. There we have seen thousands of acres of land plowed in the fall, winter and spring so carefully that the furrows look as though laid off with a parallel ruler and each furrow of equally the same thickness and degree of tilth. The result of this accurate work is no way more finely shown than in the wheat field when the grain has sprouted and is just beginning to make its growth. Although much of this is sown broadcast by the hand, yet the seed falling on this finely plowed land rolls as it drops equally into the hollows between each furrow, and comes up in as straight a line as though it had been drilled, and being covered just the same depth grows as evenly as though drilled. Writing on this subject of plowing, Dr. Henry Stewart, the veteran agriculturist, says in a recent issue of the Country Gentleman:

"Right here we may consider what the effect of good plowing should be. It is far too common to think only of the mere disturbance of the surface, so that sufficient soil may be loosened to cover the seed, quite irrespective of how the subsoil may be left for the roots to grow in. It is probable that not one plowman in a thousand ever gives a thought to this. All that is thought of is to get sufficient covering for the seed, and such a presentable surface after this is done as to make the field appear respectable and insure the intended growth of the seed. But the seed cannot be properly put into the soil unless the plowing has been done in a proper manner. For to insure the even growth of the seed, this must be deposited at an even depth and consistence, at least if the crop is expected to yield its full product.

Then what are these conditions? The soil should be of even consistence and porosity—that is, it should be free from clods or hard lumps, and should be of an even depth all over the field and along each of the furrows. This condition depends completely on the evenness of the plowing—on the plow's having been kept on an even level all along every one of the furrows, and also on an even balance as to its parallel course with the bottom of the furrows. When this has been done, all the seed sown will have the same depth of soil over it, all the soil will have the same consistence and practically the same fineness, and the seed then will all have the same equal conditions for its growth.

Necessarily, all this has much to do with the growth of the crop. Any person who has seen the best plowing done on the English wheat fields, and has critically examined the field after it has been finished, will not be surprised that an average yield of the crop on the well-cultivated English farms is fully four times as much as our best average, and that the meadows following this good preparation of the land should feed one bullock to the acre on the pasture following this large yield of grain. Nor would they feel surprised that land cultivated on the ordinary methods which follow the lines mentioned should pay the owners, in rent, made by tenants, a satisfactory interest on their great valuation.

The secret of all this is that these farms are plowed in such a manner as is very rarely seen on this side of the ocean, with the result that every seed sown grows, making an average yield of 30 to 40 fold or more. By this perfect plowing every inch of the land is made to contribute to the feeding of the crop its equal share of food from the soil, and the latter is in the best mechanical condition for the growth of the roots and the due retention of the moisture.

If we examine the plows in use in that country, we shall find, for the most part, but one pattern—a long, gently-sloping mold-board, with long handles, so that the plowman has perfect control over the motions of the plow, and can, with the greatest ease, keep the furrows of equal width and at an even depth, and so turn over an equal furrow slice always in the same condition. And with the always liberal supply of food for the crop due to the even richness of the soil in available plant food, these farmers make crops three times as much as our best, and thus reap from the land a liberal living for two persons—an occupier or tenant, and an owner, who gathers in a yearly rental equal to the whole value of our average farm lands."

We would strongly urge farmers to give greater attention to the importance of good plowing, as thus illustrated there is money in it for them besides the satisfaction always felt in seeing good work done. Better to plow five acres well than three or four

times that area badly. The result will be seen not only in the first crop grown, but for years afterwards. Instead of plowing round and round the field, which can never result in the turning of a furrow of even depth and always leaves much of the land unbroken at all, lay off the field into beds of even width and plow from side to side of the field, and then after the crop is seeded plow out the headlands of the beds and leave all the field a picture of neatness and good work. Where the land is wet or liable to flooding make the beds narrow and throw the furrow high in the centre, with good, deep and clean worked out furrows between them. This will dry and drain the land. Where the land is dry and not liable to be flooded make the beds wider with shallow furrows between. In this way seek to meet and provide for the special conditions affecting each field and thus give to the crop the best opportunity for succeeding. "It is not in the power of mortals to command success, but we'll do more, deserve it."

FARMING IN SOUTHSIDE VIRGINIA.

In the section of the State of Virginia known locally as "Southside," and which comprises that portion of the State lying between Tidewater on the east, Piedmont on the west, the James river on the north, and the North Carolina State line on the south, is found a great stretch of land much of which is now as nearly in a state of nature as it was when the country was first discovered. A great part of this vast area of hundreds of thousands of acres has been at one time or another under cultivation, and is still owned in large plantations by the representatives of families who before the war were rich planters. Owing to the immense losses sustained in the war and the ending of the system under which these plantations were worked before that time much of the land has never been brought again into cultivation since the war, or, at best, (or worst, it would be nearer the truth to say) has been worked by negro tenants, who have reduced its productive capacity to the lowest ebb by their shiftless system of cropping without rotation or manure. As a result of all these changes a very large part of this area is now looked upon as being the poorest section of the State, and one in which it is difficult for any one to farm profitably, even though the land were given—and only the taxes were to pay. We propose to show that this is an erroneous idea, and that under a proper system of management, by intelligent reading and thinking farmers, and by the adoption of live stock as the

main factor in the system these lands can be made in a few years as profitable as any lands in the State, and that the whole area can be made to blossom as the rose. About 12 years ago Mr. Sandy, of Burkeville, went into occupation of one of these old plantations belonging to his family, which had been rented to colored tenants for years, and which had then been given up because the last occupier could not make it pay the taxes. Mr. Sandy decided that he would convert the place into a dairy farm, and with that end in view has persistently stuck to the work ever since. He commenced his uphill task with only a very small capital, practically all of it invested in team and implements to work the place. He set about his task methodically determining wisely to proceed to the redemption of the place by not undertaking to work an acre more than he could find time to fully and perfectly plow, cultivate and manure. In this way he continued year by year adding an acre or two more to the land under cultivation, until now he has had this year in crops 21 acres in corn, 9 acres in cow peas, 4 acres in watermelons, 1 acre in Irish potatoes, and 36 acres in hay. This cultivated area lies close around the beautiful home, and fine barns which he has built, whilst outside this area he has 500 acres in rough pasture enclosed with a wire fence. Upon this farm he has carried an average of 35 head of young and old cows, 30 sheep and 50 hogs, besides the team required for the working of the place and a few young horses. The whole place is worked and made subservient to the end of producing the best return possible from the fine herd of Holstein cows which he has built up. To secure this end there must be an abundance of the best feed all the year around. This year one field has grown corn for the silos, of which there are two. This crop made 20 tons to the acre, and was cut with the corn harvester and stored in the silos by the 29th of August. A second field was in corn for the grain and fodder. This field was put in shock on 5th of September, and the corn shucked out from the 1st to the 15th of October and placed in the corn house. The average yield of corn was 60 bushels to the acre. The fodder from this crop was cut up in half inch lengths and packed in the barn, and is now a mow of fine feed, never having had any rain on it to injure it since it was shocked. The hay crop was this year a light one, not making over 1 ton to the acre. From the acre planted in Irish potatoes 135 bushels were dug. From the 4 acres in watermelons 3,000 large melons were shipped to market, and hundreds of small ones were fed to the hogs and other stock. During the year an-

other field of 10 acres has been seeded down to grass. This field was seeded to crimson clover in the fall of 1902. In June, 1903, this was plowed down and the land was harrowed at intervals through the summer to kill out the weeds and put it in fine tilth. In July lime was applied to this land at the rate of 30 bushels to the acre and harrowed in both ways. The grass seed was sown August 18th to 20th, 28 quarts of seed consisting of timothy, herds grass, blue grass and clover per acre being used. At the time of sowing the grass seed 400 pounds of raw bone meal per acre was applied, being harrowed in both ways. The land after seeding was rolled both ways with a heavy roller. At this writing there is a fine stand of grass on the field. The yield of pea vine hay from the cow peas was a heavy one, and was secured in excellent condition, making a most valuable addition to the feed in the barns. The cut corn fodder supplies a carbohydrate feed, the cow peas a protein one, thus permitting of a balanced ration of long feed being fed every day with these feeds. Cut fodder, cow pea hay and silage, with some bran and flaxseed meal, are fed to the cows and make a good milk yield. An average of 15 cows has been milked every day through the year, and the cream, separated on the farm by a separator run by power, has been shipped to Richmond. The money received for this cream was \$1,293.49. The separator milk is fed to calves and hogs and paid well used in this way. Fourteen calves were sold at an average price of \$30 each, bringing \$420 more to the credit of the herd. Hogs, of which a fine herd of pure bred Berkshires is kept, have been sold in large numbers, at least \$700 worth, Mr. Sandy having always a demand for all he can supply at good prices. All stock is kept well bedded with leaves and litter, and the manure hauled out directly on the land as made. This is the secret of the success of the crops grown, and the constantly increasing fertility of the farm making it capable each year of carrying more stock. The rough pasture, which years ago was indeed rough, is now by constant grazing with all kinds of well fed animals, becoming quite a fine pasture and keeps a large number of animals in fine condition all summer, and until very late in the fall. The fertility of this outside land is constantly increased, and as acre after acre of it is brought under cultivation it gives evidence of this in the better crops produced each year. Mr. Sandy does not rely on commercial fertilizer to improve his farm, though he does use some phosphate to help the growth of his cow pea crop. He has got good results from the use of slag

meal for this purpose. From the use of lime he has got the best results both on corn, wheat and grass. The field which grew corn this year was seeded to wheat and oats October 18th to the 20th, and all the land intended to be cropped next year is now plowed and lime will be applied at the rate of one ton to the acre during the winter. From the foregoing it will be seen that the work of reclaiming these rundown Southside lands is not a hopeless one, but that under a proper system of management and care and with intelligent study of the needs of the crops profitable live stock farms can be made of them in a few years. Mr. Sandy is deserving the thanks of the State for having demonstrated this fact.

CORN YIELDS.

We shall esteem it a favor if our subscribers will report to us the best yields of corn secured by them in 1904. The crop in the South was largely above the average in yield, and we cannot but think that many farmers must have made some most excellent yields. We desire the information in order that we may let the world know what the Southern States, and especially Virginia, can do in the way of corn production. Other States are making great boasts of the yields they produce. Surely we can match them at this business. In the past some of the heaviest crops of which we have records have been made in the South. We desire to show that we can still equal the record at least and may be excel it.

THE PURE CULTURE METHOD OF SOIL INOCULATION.

Realizing the interest aroused amongst farmers by the recent discovery made by Dr. G. Moore, of the Department of Agriculture, as to the possibility of inoculating land with the nitrogen bacteria peculiar to the different leguminous crops so as to absolutely ensure a successful growth of the leguminous crop desired, other conditions necessary being also observed, we asked Dr. Moore to write us an article on the subject. Pressure of duties preventing his acceding to this request, he suggested that we should ask his scientific assistant, Mr. Robinson, who was perfectly familiar with all the work that has been done to write the article. We adopted this suggestion, and now have pleasure in publishing the article which we regard as a most valuable contribution.—
Ed.

Editor Southern Planter:

Soil inoculation has become, within the past few

years, a matter of such common experience that it is perhaps unnecessary to go into a lengthy discussion of what it means, and for what end designed. Primarily it is an operation undertaken to get a "start" with some leguminous crop which experience has shown needs to be supplied with certain bacteria. Plants of this family (which, in general, bear their seeds in a pod or *legume*), when grown in contact with the proper bacteria, form upon their roots small knots or nodules variously known as "nitrogen knots" or "nitrogen traps," and which, the farmer now generally recognizes as the reason why his clover or cow peas ploughed under add in no small degree to the crop producing ability of the soil.

These nodules are the result of irritations set up in the root tissues by the bacteria, and the latest views as to their structural nature regard them as rootlets whose form has been altered by the presence of the organisms. As plants differ in the shape, size, and arrangement of their roots, so these nodules differ widely with the various legumes, from tiny spheres to swellings as large as marbles, while the lobed, flattened forms are sometimes grouped in clusters much larger.

It has been a matter of common experience when sowing legumes on new land that the first two or three seedings fail to make a stand. A catch may be secured, but the plants do not persist. After losing two or three seasons the crop usually becomes established, and thereafter there is little difficulty unless too long a period elapses between successive sowings of the same legume. The establishment of the crop after repeated failures is explainable in two ways, both of which are probably concerned. The bacteria adapted to form root nodules are introduced with the seed and chaff and gradually spread and increase, or organisms already in the soil, but previously associated with some native legume acquire, after a few years, the ability to infect the sown crop. If figures could be gathered representing the annual loss of seed and labor from such attempts to establish clover, peas, etc., on new land the aggregate would doubtless convince the most skeptical of the economy, and, in many cases, the absolute necessity of attempting some form of artificial inoculation. Especially is this true with alfalfa, the crop so earnestly desired by every wide-awake farmer, who has stock to feed or a market for hay. The fact that this crop once established yields three to five cuttings of hay a year, and makes a meadow or pasture more nearly permanent than any other plant of equal feeding value, justifies the grower in going to any reasonable trouble or expense to furnish the proper conditions for growth.

Cultural methods were long thought to be the secret of success, and endless have been the experiments to determine the *sure* method, but the fact is now recog-

nized that no amount of care in the preparation of the seed bed and subsequent handling will ensure success where the nodule forming bacteria are lacking.

Consequently there has arisen the practice of using soil from an old field to spread upon the ground or drill in with the seed. This method is the natural and obvious one, and, where climatic and soil conditions are favorable, the inoculation thus brought about makes the difference between success and failure. Soil for such purposes has, within recent years, been advertised for sale and shipped long distances, and herein lies the chief objection to the soil method. Along with the beneficial organisms in the soil are distributed weed seeds, fungus diseases and insect pests. The history of the spread of such plagues by less deliberate means contains too many instances of vast damage wrought to permit viewing the matter as a slight risk justified by the end. The expense involved is, likewise, a considerable item. A plantation in Alabama, which the writer visited during the past fall, had imported a ton of Illinois soil to secure a start with alfalfa. This was considered sufficient for five acres only; for inoculating 500 or even 50 acres it can readily be seen that the cost would be prohibitive.

Several years ago the Secretary of Agriculture, who for years had been interested in extending the use of legumes as soil renovators, took up the investigation of the bacteria so necessary to their successful growth, with a view to securing pure cultures capable of use in the field. At that time there was a commercial product manufactured in Germany known as "Nitragin," the invention of a distinguished botanist, Professor Nobbe, of Tharandt, which in laboratory tests promised to be the effective means sought. In field practice, however, nitragin proved for the most part without beneficial effect. The cultures were sent out in tubes containing colonies of the bacteria growing upon a solidified medium, rich in nitrogenous food materials. The price was one dollar per tube, the contents of which, dissolved in water would treat the soil of a half acre. Many failures were, no doubt, due to deterioration in transit, but a more fundamental fault lay in the method of growing the organisms. Nitrogen was so easily obtainable in their food supply that, by disuse of their natural power, they soon lost the ability to utilize or "fix" free nitrogen—the nitrogen of the air. Overfed, they became inert and failed to produce nodules when brought in contact with the host plant.

In the Laboratory of Plant Physiology of the Bureau of Plant Industry at Washington, experiments were undertaken to discover an artificial medium which would permit a satisfactory growth and at the same time preserve the nitro fixing power of the organisms—that is, to secure a virulent culture. The

keynote, was struck after trying numerous combinations, in the omission from the medium of any combined nitrogen, forcing the bacteria to utilize for their very existence the nitrogen in the air about them. Far from producing overfed or lazy organisms, the result of such rigorous training is the production of a strain of bacteria which are, so to speak, "nitrogen-hungry." A further step was made in finding that this medium need not be solidified with gelatine as previously supposed, a solution in water of a few simple salts furnishing a basis of growth after the organisms are once isolated. The method of distribution was now to be considered. Tubes or bottles offered too many risks in shipping, as well as other difficulties of a practical nature. Various absorbents were tried, and it was found that cotton soaked in the liquid culture would take up the organisms and bits of the cotton so treated would serve as starters for the new cultures. The final step was taken when it was demonstrated that this impregnated cotton could be dried and kept for the space of a year, and when again immersed in water would produce effective culture. It then became an easy matter to send to any quarter of the world a "dry culture" whose action, under the proper conditions, could be predicted with as much certainty as that of yeast cultures or yeast cakes so commonly used as leaven. To hasten the growth of the organisms it was found expedient to furnish with the cotton starter certain nutrient salts—viz., sugar, potassium phosphate, magnesium sulphate and ammonium phosphate, properly proportioned. With the food thus supplied, two days gives a growth of bacteria sufficient to change clear water to a milky liquid, ready to treat seed or soil.

The method being perfected it was deemed advisable that a patent should be taken out, thus securing for the use of the Department of Agriculture the result of its own investigations, and guaranteeing to the public that no monopoly could be maintained by commercial producers of similar cultures. Under the provisions of the patent, however, no restriction is placed upon the manufacture of efficient and properly prepared cultures by such concerns.

During the past year the Department of Agriculture has furnished to all who have applied inoculating outfits with plain directions for preparing the liquid culture. These experimental outfits have gone into every State in the Union, and have furnished evidence, based on several thousand field tests, with all of the legumes, that the new method is thoroughly practical and remarkably effective. Indeed, evidence is not lacking that the organisms thus introduced are more efficient as nitrogen gatherers than those normally present in soils, their method of growth accentuating this power.

In this connection it must be mentioned that cultures are separately prepared for each of the common

legumes, that for red clover, for instance, not being the same as for alfalfa. Without going into a discussion of the precise nature of the organisms concerned, it is sufficient to state that quicker results are obtained by using specific organisms for each crop, although cross inoculations are by no means impossible. It must not be expected that inoculation thus easily accomplished does away with the necessity for proper preparation of soil, liming for acidity, supplying potash and phosphoric acid where deficient, and the various cultural practices common to best usage. The nodule organisms are thoroughly efficient in supplying a lack of nitrogen—indeed, soil rich in nitrogen renders them of little effect—but their beneficent activity cannot replace rational soil treatment or overcome distinctly adverse climatic conditions. Neither is it to be expected that in soils already adequately supplied with nodule-forming bacteria the introduction of a fresh supply will materially increase the yield or add to the fertility.

Furthermore, while no special knowledge is required in handling the cultures as sent out, the ability to read understandingly, willingness to comply with directions, and plain common sense are distinct requisites. If the housewife mixes yeast in the sponge and leaves the pan in a chilly part of the room she is not surprised when she finds that the yeast has not worked. If the dry culture is treated with a similar disregard for explicit instructions and ordinary prudence the culture must not be held to account when the water fails to become cloudy. The amount of *originality* exhibited in this connection is remarkable. Using a pickle pail where a "clean vessel" is required, boiling, or placing the solution on ice are characteristic specimens. As the principles underlying inoculation become better understood, failures due to such mistakes will be eliminated. Notions of magical power will be replaced by the recognition of logical processes.

Many reports have found their way into the public press in regard to the wonderful properties of the "vest-pocket fertilizer" and some wrong impressions have been made. The great interest awakened, however, has served to call attention to the importance of conserving the supply of nitrogen in our cultivated soils by the use of leguminous crops for green manure and forage. The necessity of inoculation is sometimes at once apparent and the means is now provided without the dangerous and costly expedient of soil transfer. Under the provisions of the patent previously mentioned several concerns are preparing to place upon the market inoculating outfits prepared by the dry culture method, and the benefits of the discovery will soon be placed within the reach of all whose soil conditions call for artificial inoculation.

T. R. ROBINSON,

Scientific Assistant, Bureau of Plant Industry Department of Agriculture

ALFALFA.

Editor Southern Planter:

I have been a reader of your valuable journal for the past three years.

Would like to give you my experience with alfalfa. In September, 1902, I sowed a lot in alfalfa. The land was good and I got a splendid stand. By the 1st of December it was from 12 to 15 inches high and the thickest growth I ever saw. Roots that I drew out were 23 inches long and left some in the ground. The last of April, 1903, I cut an immense crop of hay. I got five cuttings during the year, the last being about the 15th of September. There was no difference in the first three cuttings. The fourth was not so good, had yellow spots on the leaves. The fifth was as much or more crab grass than alfalfa.

I was told that it would come again in the spring and intended to top dress it, but early in February, 1904, I found that the alfalfa was all dead to the bottom of the roots. Some people tell me I cut it to death, others said I did not cut it enough, that I should have clipped it as often as it got high enough until the 1st of August, to give it root growth.

On the 6th of last September I seeded another piece and got a fine stand, but owing to the dry fall did not get quite the growth that I did with my first lot, but have a good stand and it is looking well at this writing.

I would like to know how to treat this crop in order to maintain and perpetuate the stand and growth.
York County, Va. J. S. H.

The reason the first crop did not stand longer than part of a year was because the land had not the alfalfa bacteria in the soil. Until the soil becomes thoroughly inoculated with this bacteria the crop will not persist but gradually die out. This bacteria can be had from the Department of Agriculture at Washington in quantity sufficient to inoculate seed for a small area and when this has made a year's growth soil taken from the field can be used to inoculate other land, and thus ensure a stand if all other conditions are satisfied. Amongst the most important of these is that lime should be applied to the land before the seed is sown, say 20 to 30 bushels to the acre. The bacteria requires an alkaline soil for its success. In this issue will be found an article on the alfalfa bacteria, to which we invite attention. We would advise you to get bacteria and inoculate some soil with it and spread in spring on the lot newly seeded. This may possibly help to secure a permanent stand if the land be sufficiently alkaline for it to spread. The crop should be clipped the first year two or three times with the mower when 4 or 5 inches high before it is allowed to grow up sufficiently to cut for hay. This clipping

tends to cause the plants to tiller and cover the land and induces root growth.—Ed.

CORN STALKS.

Editor Southern Planter:

In the December issue of THE PLANTER Mr. Camp asks for the best method of handling heavy corn stalks. Being in a part of the State similarly situated and having exceedingly large stalks to handle I will give him my way. We do not have stock enough to consume the stalks, if harvested, so they are left to be picked over by the animals after husking.

At any time during the winter when there is a proper condition of soil, we run our heavy disc over the stalks, not solely for the purpose of cutting them, but to cultivate the ground, and we do this thoroughly, and let me say right here that we have found this one of the best workings the soil gets. Sometimes we put manure on among the standing stalks, mixing all in with the disc. We plow as soon thereafter as possible, and we use a plow sufficiently large to take a furrow broad and heavy enough to cover the stalks and any other litter that may be on the ground. We use a chain or a weed hook that all may be buried. We experience no difficulty in cultivating any other crops where the stalks have been plowed in this manner. We have followed with corn, potatoes and peanuts.

The great fault in this section is that few people do really plow. A narrow furrow, set up edgewise is only half plowing. It costs more to plow, and leaves all dry litter or stalks where the harrow will move them. This should all be in the earth to add to the much needed humus.

Many people treat their land as though they had a spite against it and wished to destroy its fertility as fast as possible. Every stalk is cut and gleaned away, all grass or litter is collected and burned. As a result the land is constantly becoming dead and clammy for want of humus. If they would only use plows that will plow and then depend upon other tools to do the rest they would accomplish more with less labor. Use the disc and use it freely. Don't be afraid of too much manipulation of the soil. It will stand all you find time to give it.

James City Co., Va.

B. F. WRIGHT.

When corresponding with advertisers, kindly mention the SOUTHERN PLANTER.

ENQUIRERS' COLUMN.

Enquiries should be sent to the office of THE SOUTHERN PLANTER, Richmond, Va., not later than the 15th of the month for stories to appear in the next month's issue.

Second Crop Irish Potatoes—Seed Potatoes—Tomatoes. Effect on Land.

1. Would you advise planting second crop Southern grown Irish potatoes in this part of Virginia? (Potatoes were grown in South Carolina.)

2. What is your opinion in regard to planting large or small potatoes of my own raising, or would you advise changing to Northern grown seed? How much fertilizer and what kind would you advise using?

3. Tomatoes are one of the principal crops of this section. I have been told by old farmers that they will take the place of lime to a certain extent in taking the sour acid, etc., from the ground. Is this so?

Roanoke Co., Va.

E. A. GRAHAM.

1. We think you would find second crop Irish potatoes to do well in your section. We have had good reports from their use in Piedmont Virginia. We think it would be better to use Virginia grown seed rather than South Carolina seed, as there is so great a difference in the climatic conditions between South Carolina and your section. Such extreme changes rarely result in good returns with seed of any kind.

2. We have had good results usually from planting seed of our own growing for several years in succession. In the fall we published a communication from Piedmont Virginia showing excellent returns from potatoes grown very many years from the same seed. We do not advise planting either very large or very small sets. A medium sized potato or a large one cut to 2 or 3 eyes almost always gives the best results. In this issue you will find advice as to a fertilizer for the Irish potato crop.

3. There is no foundation whatever for the idea that a tomato crop can supply the place of lime in correcting an acid condition of the soil. The two forms of acids are entirely distinct from each other.—Ed.

Hog Pasture in Orchard—Early Hog Pasture.

1. I have a peach orchard just beginning to bear which I wish to use as a permanent hog lot, as the land is too steep for cultivation. What should I sow for a permanent hog pasture? The trees are doing very well but I am afraid the land is too poor to raise much clover or orchard grass. How about Bermuda grass?

2. How soon after sowing seed could the lot be pastured?

3. What can I sow in the spring for early hog pasture?

4. When putting lime around fruit trees how close should it be put and how much to each tree?

5. Will storing wood ashes and poultry manure together cause either of them to lose any of their value as a fertilizer?

THREEZE.

Roanoke, Va.

1 and 2. We do not think you can do much in growing Bermuda grass in your section. Your elevation is too great. We would sow Orchard grass and clover. If the land is too poor to grow these we think the trees will need all the plant food in the soil. It is poor policy to rob young trees by trying to grow another crop on the same land.

3. Canada peas and oats will, in your section, probably make the earliest pasture you can get. Sow in February.

4. Any fertilizer or top dressing to benefit fruit trees should not be spread immediately around the trees but out where the branches extend. The feeding roots will always be found to be as far from the trunk as the length of the branches.

5. Yes. The lime in the ashes will liberate the ammonia in the poultry manure.—Ed.

Hydrocyanic Acid Gas—Burr Clover—Alfalfa in Orchard—Canada Peas.

1. Can you give directions for producing hydrocyanic acid gas for fumigation purposes, and about cost of the same.

2. When should Burr clover be seeded?

3. After sowing Burr clover, Crimson clover, or Hairy vetch, how long a time does it require before they may be grazed?

4. Would it be desirable to grow alfalfa in the orchard for hogs?

5. Is the Canada pea valuable as a soil improver, and would you advise them for hogs in this section?

Northumberland Co., Va.

Z. A. GILL.

1. Hydrocyanic acid gas is made from the following chemicals: 1 Fused cyanide of potassium; 2 sulphuric acid; 3 water. The cyanide should be guaranteed chemically pure and the best grade of sulphuric acid be used. Any clear water can be used. The quantity of the drugs to use depends upon the space to be fumigated and the amount of gas to be made. About equal parts of the cyanide and the acid are needed with two or three times as much water. Ask your drug merchant for prices of these chemicals.

2. In the fall. It grows through the winter and matures in May and June.

3. This depends altogether on the growth the crops make. If seeded early in the fall, say August and September, they may usually be lightly grazed before

winter sets in, but if not sown so early, should not be grazed before February or March.

4. In an old orchard alfalfa may be sown with advantage, but we do not regard it as a proper crop to seed in a young orchard.

5. Yes. Canada peas and oats are valuable as a soil improver and grazing crop for hogs and do well in Eastern Virginia, when sown early enough. They should be got in in February or March at latest in that section.—Ed.

Storage for Root Crops—Saving und Applying Manure—Angus Cattle.

1. Has THE PLANTER any good designs for underground storage room for root crops, apples, etc., either with or without room above?

2. Am feeding 70 head of stock—mostly cattle—under one roof, bed liberally with straw and refuse of shredded fodder, making considerable manure. Kindly let us have an article in your next issue in regard to best method of preserving manure, the best time to apply it and on what crops for general farming. I have found that excellent results are obtained by plowing under in spring and by using as top dressing on fall sown grain and grass, provided it is applied early in fall, but rather poor results from top dressing in late fall and winter on frozen ground.

Nearly all of the manure is made in winter. I wish to use it as top dressing for grain and young grass as far as practicable. Would you advise applying it as fast as made, regardless of season, or heaping it until towards spring? By liberal bedding I keep it under the stock for about 30 days. Handled thus it does not heat. Should I keep a layer, say 2 feet deep, over summer in order to have it on hand for early fall? Would it materially decrease in value? Is it advisable to use potash (muriate) and phosphoric acid on manure in barn? Do they prevent the escape of ammonia and are they needed to balance up the plant food constituents where balanced rations are fed to stock?

Last season I hauled the manure during winter and placed in small sharp piles on clover sod for corn. This was spread just before the plow in spring, and land planted to corn. It yielded fifteen barrels per acre by actual measurement. Next season my corn field is too far from barn to haul manure. Hence my inquiry. Your reply, or reference to up-to-date authorities in this line, should be of interest to all farmers.

3. What can you say of the longevity of Angus cattle in comparison with other breeds? At about what age would their usefulness as breeders (both sexes) begin to wane, with good individuals and under good treatment?

A. G. P.

Culpeper Co., Va.

1. We do not have any plans for underground stor-

age for root crops. We have, however, on several occasions, given full instructions for such buildings, and will bear the subject in mind and write upon it later. Our space this month has so many demands on it that we cannot do so now.

2. Numerous experiments conducted at different Experiment Stations in this country and Canada have conclusively shown that the most economical way to handle manure, both in the direct saving of cost in handling and in economising the plant food in the manure, is to haul it directly on to the land as made and spread it at once. Whilst it is no doubt most valuable used as a top dressing on wheat, winter oats and grass, applied in the fall and winter, and used in this way largely prevents winter killing of the crops by the heaving of the land through frost, yet we are satisfied from personal experience and a consideration of the experiments made, that in the South the best place to use the manure is to apply it on land intended to be planted in corn. It is practically the only fertilizer which can be applied to the corn crop which is directly profitable. We have never known a case where commercial fertilizer applied to corn was done so with profit. It will frequently increase the yield but never sufficiently so to make its use profitable. Farm yard manure may nearly always be used with direct profit. If the manure is not hauled out and applied as made then the most economical way so far as the plant food in it is concerned to handle it, is to leave it packed down under the animals, using plenty of bedding to keep them clean and dry. Kept in this way it loses but little of value. The use of potash (muriate) and acid phosphate on manure is advisable, as it not only tends to prevent heating and dissipation of ammonia, but also adds the two constituents of plant food in which the manure itself is deficient. It matters not how carefully you feed balanced rations the excreta will lack in potash and phosphoric acid. You can by feeding foods rich in protein, like cotton seed meal, add largely to the nitrogen content of your manure, but no food can be fed which will balance up the deficiency in potash and phosphoric acid.

3. The Angus are so far as records and experience show as long lived and as long continued breeders as any of the other breeds.—Ed.

Alfalfa in Orchard.

Kindly advise me through your columns whether growing alfalfa in a young orchard will check its growth and where I can procure seed and inoculation for same. Also whether stone lime will help its growth, and how to apply?

Prince George Co., Md.

W. H. SCHROM.

No permanent crop should be grown in a young orchard. The trees need all the plant food the soil can give them to make the growth they ought to do,

and this should be increased by planting Cow peas and Crimson clover to plow down each year. These and cultivating the land each year up to June will ensure a growth of the trees such as they ought to make to become profitable. Alfalfa is too permanent a crop to plant in a young orchard. In our issues for the last six months we have given full instructions on alfalfa growing and to these refer our enquirer. The land should be limed with 25 or 30 bushels of lime to the acre, applied broadcast before sowing the alfalfa seed. Alfalfa seed can be bought from all seedsmen and the inoculating bacteria can be had from the Department of Agriculture, Washington, D. C.—Ed.

The Need for a Parcel Post.

I had two pounds of wheat sent from England by mail. The postage paid on same was three shillings, addressed Ionia, Va. When it got to this side it got into the express and was sent to Ford, Va., via N. & W. Ry., and I was charged fifty cents. Can you tell me how such a thing is done and had they any right to put it in the express? Package cost about \$1.22. Ionia, Va.

R. DEWSBURY.

As we have in this country no parcels post the postal authorities hand all parcels received here from countries having a parcels post to the express companies for delivery. This case shows how important it is that farmers should instruct their Congressmen and Senators to urge the passage of a law providing a parcels post for this country. It is one of those necessities which ought to be furnished by the postal service. We are behind nearly all the European countries in this matter. In England parcels up to 11 pounds in weight are received by the postoffices and delivered anywhere in that country for 25 cents postage. The minimum charge is 6 cents for a 1 pound package.—Ed.

Sow Failing to Breed.

From my own experience, if "Subscriber," Halifax county, Va., will separate the sow from the boar, feed her scantily for a day or two and then give her a pone of corn bread, made very salt, she will be very apt to conceive when put to the boar. While separated she should be in a contiguous lot to the boar and in sight of him, if practicable. As a sow's period of pregnancy is about 112 days, if successful now, she will come on in good spring weather.

CONSTANT READER.

Corn Stalk Analysis—Home Course in Agriculture—Soil for Irish Potatoes.

1. In your next issue I would like for you to give me an analysis of a corn stalk.

2. I would also like to know where I can get a home course in agriculture.

3. What kind of soil is best adapted for Irish potatoes?

TOM P. WALKER.

Norfolk, Co., Va.

1. The average corn stalk (that is the bare stalk without leaves or shuck) analyses as follows: Protein 1.9 per cent.; carbo hydrates 17.0 per cent.; fat 0.5 per cent. The stalk with the fodder and shuck on it analyses as follows: Protein 3.8 per cent.; carbo hydrates 31.9 per cent.; fat 1.1 per cent.

2. Several of the Northern and Western Agricultural Colleges, we believe, provide for a home course of agricultural instruction, but we are not aware that any of the Southern Colleges do so. Write the Cornell College, Ithaca, N. Y., on the subject.

3. A sandy loam is the best soil for the Irish potato.—Ed

Maintaining Fertility—Making Lawn.

I have been a reader of the SOUTHERN PLANTER for the past year, and find it of great value to me, although I am a farmer in an extremely small way. I do not see how any man who farms, can afford to be without it.

I read in the October number, and again in the December number a query from Mr. J. L. Camp, and it was exactly what I wanted to know. It regards rotation of corn and annual clover. I would like to ask you further about when and how to apply the lime, also the acid phosphate and muriate of potash? Where could I get the muriate of potash?

2. I am trying to get my front lawn (a very small plot) in condition to plant lawn grass. When I took possession of it two years ago it was extremely poor, and would not grow anything, not even weeds. I gave it a heavy coating of horse stable manure, and planted it in cow peas. The peas did not amount to anything. Next I turned under what peas there were, together with another heavy coat of manure, and planted in Crimson clover. The clover did worse than the peas. Again I put down a heavy coat of manure and planted in peas. I never saw so rank a growth as I got this time in peas. They were remarked upon by nearly all passers by. I cut away enough of the peas to allow plowing, and again using a heavy dressing of manure, I cultivated thoroughly and planted White Blooming Clover and wheat. The wheat is looking fine, but the clover is not there at all. What must I do to this piece of land to make it grow good clover? And when do you think the land will be in good condition to grow fine lawn grass?

If Mr. Camp will take a small reap hook and cut his corn stalks off about even with the shoulders, and again a little below the waist, and last take a heavy hoe and cut them off smooth with the ground, he will have no trouble with them next spring. This cuts them in three pieces, and is a smaller job than it

sounds like. They should be cut as soon as corn is gathered.

H. N. W.

1. Apply the lime previous to planting the corn and the acid phosphate and potash to help the clover to make a heavy growth. You will find the potash advertised in this issue.

2. Your soil probably lacks lime and the clover bacteria. Apply lime at the rate of 25 bushels to the acre and send to the Department of Agriculture at Washington for a supply of bacteria. See Mr. Robinson's article in this issue. After you have succeeded in getting clover to grow well then seed in grass.

—Ed.

Selling Cream.

Do you think Charlottesville is near enough to Washington, D. C., and Richmond for me to ship cream to either one of those places? If so would I have to find regular customers for it or are there commission men at those places that handle dairy products?

SUBSCRIBER.

Albemarle Co., Va.

Yes. We know several who ship much further distances. We do not know of any commission houses handling cream. Most shippers we know look out their own customers.—Ed.

Diseased Cattle.

My cattle have a breaking out, commencing about the eyes, looks something like warts, or a dry scale. Please tell me what it is and give a remedy for same.

A SUBSCRIBER.

This is probably caused by lice or it may be ring worm. If lice are the cause use a solution of tobacco, or better Laidlaw's Dip, advertised in THE PLANTER. If ring worm is the cause rub the part affected every other day with a mixture made of one pint of fish oil and half a pound of sulphur.—Ed.

Alfalfa.

I have a field of 8½ acres that was seeded with alfalfa in September, 1903. Neither the seed nor ground were inoculated, consequently the stand was very poor. Last July, after cutting over once, the field was broadcasted with earth from an old alfalfa field, 100 pounds per acre being used. This earth was dug from one hole in centre of field, going as deep as three feet. I have learned since that 8 inches is as deep as it should be dug. On probably one-fourth of this field, in spots, is a fair stand and the entire field was cut three times and some good hay secured, but not much. I want to know if this field should be plowed up and again be put down in alfalfa or should the parts alone that are barren of alfalfa

be re-seeded, and whether spring or fall is the proper time to do it?

W. F. HOLMEAD.

Prince George Co., Md.

Begin afresh in the fall with the whole field. Patching rarely succeeds. Sow in August or September.

—Ed.

Rotation—Liming—Cow Peas—Clover.

1. What is a good rotation of crops on a farm divided in three fields, one of which must be used from March to November or December for pasturage; at the same time having in mind the improvement of the soil?

2. Please state if lime is applied to the soil now (as I noticed is advised in one issue of THE PLANTER) would it be necessary to apply same again before seeding the crops?

3. Would you apply lime in the fall to all the land intended for crops or to only the land intended for certain crops?

4. After applying the lime in the fall what fertilizers would you apply to corn, wheat, clover and peas respectively?

5. When would you plow under peas and clover for improvement of soil; green or after maturity?

6. Would picking the pea detract much from its value as a soil improver?

7. Suppose clover and peas are sown in the spring or summer, say about July, when would you turn them under, and what crop and when would you plant next?

8. Could they (the peas) be plowed down in October, and use the lot for pasture the following spring and then the following fall plant wheat? Would this be most advisable, or what?

Caroline Co., Va.

A SUBSCRIBER.

1. Grass, followed by wheat, the land being limed before seeding the wheat, 30 bushels to the acre. The wheat to be sowed in October or November. Cut wheat in June and sow at once in cow peas with 300 pounds of acid phosphate per acre. Turn this crop down in September or October and sow Crimson clover or hairy vetch mixed with rye, wheat and oats, 10 pounds of Crimson clover and three-quarters of a bushel of the mixed grain. Plow this crop down in April or May and plant in corn. Cut the corn down as soon as sufficiently mature and sow in clover and grass with bone meal as the fertilizer.

2. No.

3. No. We would lime one field each year previous to seeding the wheat.

4. See reply No. 1.

5. When as near mature as you can afford to wait for.

6. Yes. Picking the peas will reduce somewhat the value of the crop as an improver, but not sufficiently so to warrant not picking.

7. Sow peas in the early summer and Crimson and Red clover in the fall. See answer to No. 1.

8. Yes. By following the peas with Crimson clover and the grain mixture as mentioned in reply to No. 1.—Ed.

Alfalfa.

I have some alfalfa planted on tolerable good ground, sowed this fall. It looks fine. Should it be manured next spring, and if so, with what? When I drilled it in I used raw bone meal and Peruvian guano.

X. Y. Z.

Campbell Co., Va.

We would not manure this stand the coming spring if you treated it liberally when seeded. Clip it with the mower as soon as it gets 4 or 5 inches and repeat this every time it gets that height until August, then let it make one cutting for hay and clip afterwards when tall enough and top dress lightly with farm yard manure and bone meal in the late fall or early winter.—Ed.

Fall Strawberries.

Have just read with interest the November number of SOUTHERN PLANTER. I notice a paragraph entitled "Strawberries in October." Let us have some more information on this subject. You say set in the fall and do not allow plants to bloom in spring. Do you mean to say, for instance, this fall to bear next fall? If so how long before frost should they be set? We often set in October and November and pinch off the blooms in spring, but this does not cause fruit bearing the next fall. I enclose 50 cents P. O. order for renewal.

S. R. COCKRILL.

Floyd Co., Ga.

Your enquiry reached us too late for answer to be given in the December issue. We do not understand why your plants have not given you strawberries in the fall if you kept the spring blooms pinched off as soon as they appeared and also kept down the runners. The vigor thus retained in the plants usually expends itself in fall blooming and a crop. We know several parties who have thus succeeded in getting fall berries.—Ed.

Low, Black Land.

Please tell me in next number of your paper best treatment for low, black land that will not grow cow peas.

E. B. D.

Rutherford Co., N. C.

This land wants liming to sweeten it. Plow and apply 50 bushels to the acre broadcast and harrow in lightly. Do this at once. In May try cow peas again.—Ed.

Onion Growing.

I have some land that I think is ideal for raising onions. I want to try raising them by sowing the seed in hot bed and transplanting in the field. People here tell me they will not keep after ripening until winter. Is this true?

Would like some information as to the proper variety or varieties, time to sow seed, distance apart, best method of handling after ripening, etc.?

Weakley Co., Tenn.

R. B. H.

In our last issue you will find an article on onion growing from sets and seed. This will give you the information you desire.—Ed.

Onions raised from sets will not keep over the winter but onions grown from seed will do so, though, as when grown in the South they mature earlier than in the North and the winter cold is not so severe as to keep them completely dormant, they will not keep so long into the spring as Northern grown ones will.—Ed.

Improving a Poor Farm.

I have bought a poor farm and want to raise corn, wheat, tobacco, clover and peas. Tobacco is the principal money crop I want to raise. Please tell me through your paper how to rotate these crops so as to get the most money out of them and improve the land at the same time.

S. W. PULLIAM.

Stokes Co., N. C.

In this issue you will find a reply to an enquirer as to improving a poor farm in Maryland. This is what you really need to follow. If, however, you cannot afford to wait so long for salable crops as we there provide for, then you should select the best land you have for your tobacco lots and lay off three of these and work them in a rotation by themselves of clover, tobacco and wheat. Do not make these too large, only so large that you can afford to fertilize one of them heavily each year for tobacco. Make a small crop of good tobacco and you will then get something for it and will also get wheat and clover. Improve the rest of the farm by growing cow peas in summer and Crimson clover in winter, using acid phosphate to get the peas and clover and these will give you corn and wheat.—Ed.

Alfalfa.

I have heard so much about alfalfa for several years that I am thinking of seeding one acre next spring and I write to ask you if you can tell me where I can get good reliable seed and if it is necessary to have seed that was grown in our section and thus acclimated to our soil and conditions. I would also like to know how long we may expect to get good crops of hay from one seeding, and how many crops we may

expect to cut per annum where land is good and well prepared and fertilized? I would also like to know where I can secure, at the lowest cost, enough soil to inoculate the one acre with the needed alfalfa bacteria?

The land on which I wish to experiment is typical chocolate Albemarle soil with a stiff red clay sub-soil. Land stood in grass six years and last spring was a heavy blue grass sod when broken for corn crop grown in 1904. If I get favorable reports I expect to plow the one acre with 2 or 3 horse turning plow and follow along in same furrow with sub-soil plow, and after land is well ordered with disc and spring tooth harrows I will put down on the one acre one-half bushel alfalfa seed with the following fertilizers:

400 lbs Baugh's Raw Bone.....	\$ 6.00
200 lbs Kainit	1.50
400 lbs. ashes from tan yard.....	2.00
400 lbs. 16 per cent. acid phosphate.....	2.60

Total cost of fertilizers.....\$12.10

Amount of plant food according to guaranteed analysis:

132 lbs. phosphoric acid.
52 lbs. potash.
18 lbs. ammonia.

My idea in using a fertilizer with some ammonia is to give the young plants a quick start and try to push up ahead of the weeds. I expect I could reduce cost of fertilizers by using muriate or sulphate of potash were I to go in on a larger scale. If you know of any one near Richmond or Charlottesville that has made a success of growing alfalfa please give me name and address of such parties.

Albemarle Co., Va.

JOHN S. PARRISH.

You can get reliable alfalfa seed from any of the established seedmen whose advertisements you will find in this issue. It is not necessary that the seed should be locally grown, indeed it is impossible to get such seed, as we have never heard of any seed being saved in this State though there is no reason why it should not be grown here. A well established sod of alfalfa will stand anywhere from 10 to 20 years if carefully attended to and fertilized. We have known stands of 10 or 15 years old to be giving excellent crops. After the second year a field may be cut three or four times each year. The first year it should not be cut for hay more than once, but should be clipped with the mower every time it gets 4 or 5 inches high and the clippings be left as a mulch. This tends to induce tillering of the crowns and strengthens the roots. You will find inoculated soil advertised in THE PLANTER by several parties. You can, however, get from the Department of Agriculture at Washington enough bacteria for the area you propose to seed for the asking. With the preparation you propose to give the land and the fertilizer you propose to use, if you will add to it a liming of the land with 15 or

20 bushels of lime to the acre when you first plow it you should not fail to make a success. On J. B. Watkins' place, at Hallsboro in Chesterfield county, and on the Ginter estate near this city, alfalfa has been grown very successfully, and Dr. W. C. Stubbs, of Sassafras, Gloucester county, has a large area in the crop doing well. We would advise you to use the muriate of potash instead of kainit. We doubt, however, whether on your land you need to use potash at all. Your soils are rich in it.—Ed

Protecting Apple Trees From Rabbits, Etc.

Which is the best way to prevent rabbits and hares from attacking young apple trees? Are white lead and linseed oil, or white wash and gas tar mixed? Also whether either will be injurious to trees? If you know of any other remedy more effective and which will not injure the young trees, please let me know about same? Also tell me the best time to use the solution.

Will alfalfa do well in this section?

Warren Co., Va

E. R. PHILLIPS.

Painting the trees with white lead and oil, or with gas tar or white wash, may act as a slight protection, but neither are effective in a hard winter. The only sure protection we know is to wrap each tree with a piece of wire netting two feet up from the ground. This is quickly done by cutting the wire netting, which can be got two feet wide, into strips of about 4 inches wide and putting one of these round each tree, just doubling the wires on the cut end into the meshes to hold it. Yes, alfalfa will do well in your section if the land is properly prepared, limed and inoculated.—Ed.

Strawberries in the Fall—Gas Lime.

I notice in your last issue (November) you state that strawberries can be had in October by setting out the plants in the fall and not allowing them to bloom and set fruit in the spring. Will you kindly advise me how to prevent their blooming and setting fruit? Also state if gas lime, or rather lime that has been used in the manufacture of gas, is fit to use in liming land?

T. T. FRAZIER.

Durham Co., N. C.

The only way to prevent the strawberries blooming is to pick off the immature flowers as soon as they appear and keep them picked off until time to bloom for fruit in the fall.

Gas lime may be applied to land sometimes with advantage, but we prefer the fresh stone or shell lime. Gas lime is heavily impregnated with sulphur and other impurities, and these are usually poisonous to plants, therefore, the place to use gas lime is on a piece of foul, weedy land where it is desired to kill off all vegetation. When the impurities have been dissipated by exposure to the air carbonate of lime is left.—Ed.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

If the severe weather which we are having at this writing should continue through January little work can be done in garden or truck fields, but much can be done to facilitate work in the succeeding months. Compost heaps should be made up of farm yard manure, leaves and other vegetable matter and rich soil, and to these should be added liberal quantities of acid phosphate and muriate of potash and be well mixed with the compost. Both these mineral fertilizers require time to become available for the crops, and are, therefore, better mixed with the compost than applied at planting time. As much as 1,000 lbs. of the phosphate and 200 or 300 lbs. of potash to the acre may be profitably applied in the production of most vegetable crops. These compost heaps should be turned and worked over two or three times in order to get the materials into good condition for at once giving up their plant food to the crops. All this is work which can be done in the hard weather in the fields where the crops are to be grown and the material will then be convenient to apply when planting. Plenty of rich, sweet, friable soil and woods mould should be got ready for hot beds and for starting seed. Old hot beds should be cleaned out. It is never safe to use the old soil again as it is often infected with injurious bacterial matter which may cause the loss of plants. The sash and sides of the beds should also be cleaned thoroughly. Never mix nitrate of soda in the compost heaps, but reserve this for top dressing after the plants have commenced to grow. The organic nitrogenous fertilizers, like cotton seed meal and fish scrap, may be mixed in the compost with advantage.

It is too early to think of planting any crops, but not too soon to be looking after the materials required to make the fertilizer for the crops to be planted in February. In that month English peas and Irish potatoes may be planted if the weather be mild and the soil in good working order. For peas acid phosphate and potash, with a small percentage of nitrogen, is all that is needed. A fertilizer containing 7 per cent. of phosphoric acid, 7 per cent. of potash and 2 or 3 per cent. of nitrogen is about right.

Irish potatoes require a fertilizer richer in nitrogen. A good mixture can be made up of 300 pounds of nitrate of soda, 600 pounds of cotton seed meal or fish scraps, 800 pounds of acid phosphate and 300

pounds of muriate of potash. It is better to use commercial fertilizer for this crop than farm yard manure, as this frequently induces scab.

Lettuce in frames should be ready for shipping this month. Give air freely when the weather is mild but watch carefully for frost and protect against it. New plants may be set out in the frames as the others are cut to ship later.

THE VIRGINIA STATE HORTICULTURAL SOCIETY.

The annual meeting of the society was held at Front Royal, Virginia, on December 13th and 14th. We learn that a successful meeting was held. We had hoped to have had a report of the proceedings of the meeting for this issue but the gentleman who was to have sent this to us was unfortunately prevented at the last moment from attending. We hope in our next issue to give some particulars of the meeting. We are publishing herein the paper read at the meeting by Prof. Massey.

THE "CABBAGE SNAKE" SCARE.

Editor Southern Planter:

The sensational stories with regard to the so-called "Cabbage Snake" and the scare which seems to have pervaded all this section of the State have caused many enquiries to be sent to the Virginia Experiment Station, together with many specimens of worms, with the request for information. It has, therefore, seemed timely to give through the papers of the State greater publicity to the truth, to set public minds at ease and to prevent the growing prejudice against cabbage, which threatens the loss of an important crop.

Of the various specimens of worms which have been sent in to us, one or two were young earth worms, but the greater number seemed to be a species of Nematode worm, belonging to the family Mermithidae, and known as *Mermis albicans*. These are genuine worms and not snakes at all, and though allied to the *Trichina*, *Filaria*, and other worms parasitic on man, are either found in vegetable matter or in the bodies of insects, from whence they escape into the damp earth where they attain sexual maturity. This family is also closely allied to the *Anguillulidae* or "Horse-hair" Worms, often erroneously called "Horse-hair Snakes." These Nematode Worms are found living in

earth or water, though some specimens are parasitic in plants; others live in fermenting matter. Of this latter group is the *Anguillula aceti*, known as the Vinegar Worm. Some species live in mildewed wheat grains, some in heads of thistles, on roots of moss and grass; others are constant inhabitants of the beet-root, also of cabbage, barley, wheat, etc. It seems almost needless to say that none possess any poisonous qualities whatever. Since the recent scare, chemical analysis carefully conducted, has failed to reveal any toxic qualities. Cabbage cooked in certain ways is apt to produce acute indigestion in some; or it is possible that in some cases Paris green, or "Black-death" may have been ignorantly and carelessly sprinkled on the young cabbages to kill the caterpillars of the cabbage butterfly. These both contain arsenic, and if any trace remained, illness or even death would ensue from eating such cabbage. Some one discovering one of these worms in the dish of cabbage which produced the evil effects, has erroneously jumped at conclusions and imagined a new thing, not knowing that the worm (not snake) has long been known to naturalists, and is harmless, and so the tale has grown and magnified, and a profitable and valuable crop has almost been thrown out of the market in some sections through this absurd scare, which has no real foundation in fact, whatever. ELLISON A. SMYTH, JR., *Biologist*.

Experiment Station, Blacksburg, Va.

HORTICULTURE IN NORTH CAROLINA.

A PAPER READ AT THE MEETING OF THE VIRGINIA HORTICULTURAL SOCIETY, AT FRONT ROYAL, DECEMBER 13, 1904, BY W. F. MASSEY.

I am glad to say that the Old North State is by no means standing still in horticultural matters, but it is steadily progressing in various lines. I have thought that some account of this progress might be of interest to this audience.

Horticulturally, there are three separate regions in North Carolina—first, the Eastern Coast Plain, which, of itself, is divided into three sections devoted to different industries, the trucking or vegetable growing section, the strawberry section, and the section devoted to the production of flowering bulbs and tubers for the Northern florists.

Second. The sandhill country, formerly a vast forest of long leaf pines, inhabited only by turpentine workers and lumbermen, but now one of the most promising localities for the peach and grape as well as some other fruits.

Third. The mountain country west of the Blue Ridge, a region of elevated plateaus and valleys,

where apple culture is growing and where a great industry has sprung up in the growing of late cabbages and potatoes for the markets of the lower South.

Of these three general sections the coastal plain is by far the most important and progressive, and it is interesting to note that here the peculiarities of soil have determined the separation of local sections into certain specialties. While all along the Atlantic Coast Line R. R. there is more or less vegetable culture, the great centre of the trucking interest in the State is about the city of New Bern, while the strawberry industry has centered about the town of Mount Olive, on the Atlantic Coast Line, and at Chadbourn, between Wilmington and Florence, S. C. These two localities have a soil peculiarly suited to the strawberry, a dark mellow loam, retentive of moisture and underlaid by compact clay subsoil. Over 6,000 acres of strawberries are grown about Mount Olive, and last season 2,100 car loads were shipped out in refrigerators. Chadbourn is a settlement of Michigan people, who have made a great reputation for the quality and earliness of their berries, which are the first to go to market from the State. These colonists are getting rich from strawberry culture, and both here and in the Mount Olive section land that formerly sold for a few dollars per acre is now up in the hundreds.

About the town of Magnolia, on the Atlantic Coast Line R. R., the soil is a peculiarly dark sand, perennially moist. Strawberries were tried there, but abandoned, as the sandy soil did not seem to suit them as well as the heavier land at Mount Olive. But Magnolia is the headquarters of the bulb growing industry. It was found years ago that the soil there was peculiarly adapted to the growing of the tuberose, and the growers have captured the entire trade in these bulbs, both for this country and Europe. The tuberose becoming less popular the price of the bulb has fallen very much, but hundreds of acres are still produced, and of late years the growers have extended their work to other species of flowering bulbs. About Magnolia there are now grown about 50 acres of *Cannas*, 50 acres of *Caladium esculentum*, 20 acres of *Gladioli*, with considerable acreage of *Dahlias*, *Narcissus*, *Roman Hyacinths*, *Crinum*, and *Amaryllis*. All are grown on contract for the dealers in the large Northern cities, and the business is mainly in the hands of two firms, who have large curing barns and handle the crops of the smaller growers.

While there is, as I have said, a considerable amount of truck grown from Wilmington northward

along the Atlantic Coast Line R. R., it is about the city of New Bern that the greatest vegetable trucking has developed, and where the growers have the advantage of both water and rail transportation, and hence are better able to get fair rates than where the growers are confined to a single line of railroad. While there has been great progress in the trucking industry about New Bern, the progress has not been made of late in the increased area devoted to garden crops, for there has really been a great reduction in the acre by reason of the growing scarcity of labor, but in the increased attention to intensive gardening, especially in winter. Within the last five years the crop of winter lettuce has taken a leading place in Eastern North Carolina, and has been so uniformly profitable that the area devoted to it is constantly increasing, while the area in the general outside spring crops has decreased.

To give you an idea of the methods used by the best growers there I will describe what I have recently seen at the farm of Hackburn & Willett, though this is but one of the places where intensive gardening has been adopted. This firm formerly cultivated 500 acres in truck crops, but owing to the scarcity of help they have cut down their area very largely, and are devoting land formerly in truck to cotton and forage and feeding beef cattle. Still when I was there, about ten days ago, they had 45 hands busy, and will keep that many during the winter and get as many more as possible when the spring shipping season arrives. I was particularly interested in the irrigation method used there and at other places in the neighborhood. Hackburn & Willett have sixteen acres over which water pipes extend on posts overhead, high enough to work teams under. One long main comes from the pump and the pipes branch from this in two directions, the lines being forty feet apart. These pipes have small holes in them, through which the water is forced in a shower, and each line of pipe waters twenty feet each way. On six acres of this irrigated land they have cold frames for lettuce and other crops. These frames are nine and a half feet wide and 158 feet long each. There is a ridge pole in the centre and cross bars to sustain a cover of ordinary cotton cloth. Through each frame runs a one inch steam pipe, which is only used six or eight times during the winter, when there happens to be an extra cold spell, the object being merely to exclude frost. Most of the growers plant a fall crop and when that is cut out replant at once for the late winter and spring crops. But this firm found, as I have found, that this immediate replanting is apt to be followed by a disastrous amount of rot in the

spring crop of lettuce, which is usually the higher priced. Hence, they only plant a limited area for the fall crop and follow this with beets. The fall crop had just been shipped when I was there, and from one and a quarter acres they had sold \$2,000 worth of lettuce and were preparing these frames and some extra ones for sowing early beets, which they expect to have on the market in February and March. The rest of the six acres of frames had just been planted in lettuce for the spring shipment. When this crop is cut out in March the frames are at once planted in cucumbers, and when the price of cucumbers falls they have two large tanks, holding 50 barrels each, and the cucumbers then go into these in brine, and are later on sold to the picklers. The cucumbers are cleared up and second crop potatoes are planted so as to keep the frames cropped until time to plant lettuce again. They have dug 1,800 barrels of this second crop potatoes grown for the seed of the early crop. These are now covered with earth to protect them from frost, and when the Bermuda crop begins to arrive they are taken up and packed in double head barrels with whitewashed heads and stenciled with the Bermuda black diamond, and they go to New York and are sold as new Bermudas for \$2.50 to \$5 per barrel, the growers only keeping enough at home to plant their early crop, for no one thinks of planting Northern seed potatoes now-a-days. The only fraud in selling these potatoes as Bermuda is that they do not come from Bermuda, for they are really of better quality than the true Bermudas. This firm grows large areas in early potatoes, but not so large as formerly. The early potato crop of the New Bern district is about 100,000 barrels. Large areas are also devoted to early peas, snaps and melons.

Three years ago the green pea louse struck this section, and I was sent for hurriedly to go down and tell them what to do. I found a field of 125 acres literally loaded with aphides, and told them that nothing could be done that would not cost more than the crop was worth, but that if they used tobacco stems liberally in the manure for peas and dusted them with waste tobacco dust, I thought they could head them off the next season. They took my advice the next season, and that was the last of the pea louse. I have been very much amused at sundry bulletins on the pea louse from stations further north, in one of which the entomologist had a picture of a man brushing the insects off into a pan, not seeming to know that tobacco is the sovereign specific against all sorts of aphides. It is too late when the insects get there, and the idea of brushing millions off in a pan over a field of 125 acres looked childish.

The firm I have mentioned have now over two million cabbage plants ready to set, and they have by this time largely been set. They are feeding 100 beef cattle with their abundant forage of pea vine hay and corn fodder, and add some cotton seed meal with all the hulls the cattle care to eat. The main idea being, while making something on the cattle, to turn their roughage into manure for their truck crops, for they have found that plenty of well rotted manure is essential to the lettuce crop, and that even with this the best lettuce can only be grown with both manure and fertilizer. Fertilizers alone nor manure alone does not give the best results.

Years ago the sand hill county began to attract invalids from the North every winter, and the town of Southern Pines grew up, because many of the visitors found they could live there comfortably and feared to return North. Naturally they wanted to grow something. It was found that by liberal fertilization this sand could be made to produce fine crops of grapes, and for a time the grape business flourished, but of late years it has been less profitable. The chief interest for a number of years now has centered in the peach and there are some very extensive orchards and no total failures from frost have been known. New orchards are being planted in various parts of the sand hill country and the peach industry promises to rival that of Georgia to some extent.

In our elevated mountain country we have what we believe to be the best apple country in the United States. The chief drawback is the lack of shipping facilities and the extortionate rates charged by the existing line. We can bring a barrel of apples from Boston to Raleigh for less money than we can get one from the foot of the Blue Ridge. There is being some intelligent work done with apples in the mountain country, but there is great need of improvement, but quantities of apples are grown in spite of the absolute neglect. The culture of fall cabbages and potatoes has sprung up of late years on the high plateau country in Henderson county. These cabbages go mainly to Charleston, Savannah and Jacksonville, and the potatoes to all the country South and East. I have no figures to show the extent of this trade, but from the town of Hendersonville, alone, hundreds of car loads go South.

At the Experiment Station we are trying to breed a sweet corn for the South and are succeeding beyond our expectations. Sweet corn commonly fails in the South because people buy the seed exposed at the stores from the North, and this, not being acclimated, usually amounts to little. Hence, most of our people depend upon the common field corn, for the

table, and in fact the Southern white dent corn is far sweeter than the Northern field corn. A number of years ago when I was living at the Miller School in Albemarle, a friend in Ohio wrote me to know if I could get him some seed of what he called the B. & W. corn, as he had heard that Burrell & Whitman got the corn given that name from Virginia. I told him I could send him some first class Virginia white dent and referred him to a farmer who could supply him. He got the corn, and meeting him last winter, he told me that they still got the corn from the same man and that his sale of seed corn in that section of Ohio now reached 2,000 bushels annually, as they found it necessary to buy seed every year from Virginia to keep it right for silage, and he said, further, that analysis had proved that in the whole plant there was actually more sugar than in the sugar corn of the North. The sweet corns I am breeding are first a cross of the Giant and the Country Gentleman. I used the Country Gentleman to give a little more earliness with the size of the Giant. It is now a very fine table corn with deep and very sweet grains, but some years of selection are yet needed to get it to come to one type. The same is true of an early corn which I received from the New Jersey Station. This they call Voorhees Red. It is a cross of the Black Mexican on the Egyptian. It is a very early corn and makes a fair size ear, but not nearly so large as my own. Continued planting and selecting the red grains will doubtless improve it for their use, for at present it comes badly mixed with the Black Mexican, red and white grains. It will be of value for an early corn for it does not take on its characteristic color until it begins to ripen. The past season was my first experiment with this corn and it has to be acclimated yet.

I have 300 varieties of grapes in the vineyard and intend the coming season to graft a number of them over with Black Hamburg and other of the vinifera grapes and then, by spraying and bagging, to see what can be done with these in the open air. I shall use for this purpose some of the rampant growers of the Munson grapes which I do not care to grow further. Most of these are the greatest growers among grapes and will furnish strong stocks. I have so far found nothing to take the place of the Delaware, Niagara and Concord, though for home use the Green Mountain is early and good, but will not ship. The wonderful Columbian Imperial grape from Texas makes small bunches of immense grapes, larger than the Union Village and of poorer quality, in fact, worthless except for a show of big berries, and some of the finest grapes are so inveterately incline to rot that no amount of spraying will save them. Peaches are of

little value on our red clay soil and do not compare with the same varieties grown in the sand hill country. A number of failures have been made in our State in establishing canning houses, especially for tomatoes. I have warned our people time and again that they cannot compete with Maryland, Delaware and the States in the same latitude in the production of tomatoes, and in every effort they have found that I was right, and now I do not know of a successful canning house in North Carolina. On the Eastern Shore of Maryland, and elsewhere in a similar climate, the farmers do well in growing tomatoes for the canners at \$6 to \$9 per ton. I would not accept a contract in our part of North Carolina or Eastward to grow them for \$50.00 a ton. We can grow early tomatoes with forwarded plants, but if they escape the blight they succumb to the heat about the last of June or early July. The great drawback with us is the Southern blight, a bacterial disease which affects the soil and which cannot be prevented by spraying. In my home garden it takes not less than 500 plants to supply us with tomatoes for slicing raw. I once set 300 plants late for the purpose of getting fruit late in the fall. The blight took them, one after another, and I did not get two dozen tomatoes from the 300 plants. I made a similar statement at the meeting of the Maryland Horticultural Society last January. A gentleman present said, "Why they grow all right in Florida." "Yes," said I, "but they grow them during the cool season and get a fancy price for them. If compelled to sell them by the ton, as the farmers in the Middle States do, they would soon stop growing tomatoes, for the blight there is as bad as in North Carolina." Hence, I am sure that the commercial culture of the tomato will never extend South of Virginia. Our large truckers in Eastern North Carolina have learned this long ago and no tomatoes are grown there, except for home use, while in the mountain sections they are as fine as Northward, but fully as late. Our truckers have also given up the Egg Plant as a commercial crop on account, mainly, of the ravages of the potato bugs. But the same blight that kills the tomatoes kills the Egg Plants, even worse. I had two plots of Egg Plants last summer. One plot was heavily manured with manure, bought in the neighborhood, and evidently from an infected place. The other plot was fertilized with commercial fertilizer and was on land where no Egg Plants had been grown, or tomatoes either. This last plot did fairly well, while every plant in the other plot died when full of blooms. It is not hard to keep a small lot free from bugs but on a large scale they find it too difficult.

As is well known, I have for years been experimenting with a variety of bulbs for the purpose of helping our bulb growers. I have not yet succeeded in the culture of the Bermuda lily and do not think it will be a commercial success, except in the coast regions. The *Gladiolus* does wonderfully well. Three years ago I bought 100 Groff's New Hybrid *Gladioli*. This season I have dug fully 15,000, all the produce of that one hundred bulbs, in three years. Last fall (1903) the Department of Agriculture sent me 150 bulbs of tulips that had been grown in the State of Washington, which they wanted tried in a Southern climate. The past summer, when an inspector came from Washington to see what I was doing in bulbs I showed him 750 large and small tulip bulbs from the 150 and many of them larger than the Washington bulbs. The fall blooming *Nerines* and *Sternbergias* also do finely and the Washington Department has gotten some of these from me to try there. I believe that the time is not far distant when the bulb grower in Eastern North Carolina will supply the Northern dealer with a large part of the bulbs that they now import. But I suppose you have had enough of this Tar Heel gossip, and I will close here.

W. F. MASSEY.

PEACH TREE BORER.

Editor Southern Planter:

I have a letter from an orchardist wanting to know what is the best way to get rid of borers in his peach trees. He objects to using the knife because it is laborious and tedious. I know of no better way to get the borers out than by using the small pocket knife in the fall and late in the spring. Hot water and some other things are sometimes used to kill borers, but I do not know that they are successful. It is far better to prevent the borers from getting into the trees. As a preventive I have used white lead paint very successfully. Take the dirt away from around the trunks of the trees, down one or two inches and apply the white lead paint on the trunk from the ground up to about eighteen inches. Then put the dirt back around the trunk. Do this early in the spring before the eggs are deposited. When the young larve (borers) hatch and begin to cut through the paint it will kill them. I have seen no damage done to the trees by use of the paint. Repeat the application about every two years, as the growth of the tree will crack the paint and let the borers in.

Montgomery Co., Va.

R. H. PRICE.

Mention THE PLANTER in corresponding.

Live Stock and Dairy.



HOME OF MR. W. R. FLOWER, A GREAT DORSET BREEDER, DORSET, ENGLAND.

DORSET (ENGLAND) THE HOME OF THE CHRISTMAS LAMB.

Editor Southern Planter:

If you could come over to Edgewood Farm now you would find the Christmas season just a bit merrier because of the romping and skipping of the lambs about the yards and barns. These little chaps, whose merry bleats are ringing through the folds at Edgewood, are Dorsets. The little fellows could not guess what a difference there is between our bleak West Virginia fields in December and the evergreen pastures of the balmy land in which their mothers were bred.

It was my pleasure to visit Dorset last summer. I found it a lovely country. It lies at the very southern border of England and catches the warm breath of the Gulf Stream that takes all the chill out of the winter's wind and gives refreshing coolness to the summer's breeze. The woodlands have a tropical look. The wild vines clamber over the trees whose foliage is touched with the grace of the lacelike sprigs

of Scottish firs and with the rich coloring of the copery leaved beeches, and wild flowers bloom in profusion on herb and tree. The open fields are clothed with the most luxuriant grasses and the flocks that graze on these fresh pastures look as if they were never hungry, for surely in Dorset they have always been made to "lie down in green pastures and led beside the still waters." Fortunate indeed are the sheep that have been reared in this lovely country.

The sheep that have grown up in Dorset and have been bred there for over one hundred years is the Dorset. There used to be two very similar breeds of horned sheep in this section of England, the Horned Dorset, which had black noses, and the Pinknosed Somerset, but these have been blended and now all these sheep are white faced, pinknosed and horned. These Dorsets have always been celebrated for two things, their wonderful milking qualities and their early fecundity. It is told in that country that in early days these sheep were used for dairy purposes just as I saw goats used in France last summer.



A GROUP OF DORSET BEAUTIES.

They have possessed the habit of producing lambs in the fall months as far back as the memory of the oldest inhabitants there can reach. It used to be a common sight at the markets in London to see Dor-

set ewes sold in the early spring at remarkable prices and in certain parts of England have become the choicest mutton.

It was a sight to see the rams turned into these



FIRST PRIZE PEN OF DORSETS AT THE ROYAL SHOW, ENGLAND.

set ewes sold at Christmas with lambs at their sides and both lambs and ewes fat and fine.

Customs have changed somewhat in respect to marketing the sheep of Dorset, but the fall lambs still bring most profit to the flocks. These lambs are



EIGEWOOD TYPE OF DORSET RAM LAMBS.

sold last June. Sometimes eight rams were turned in on the same day and thirty and forty ewes would be recorded in service within a few hours. Most of these Dorset ewes have lambed down by Christmas and the lambs are being pushed for the market. The



DORSET EWES.

lambling is attended with little loss, as the ewes lamb under the most healthy conditions out in the fields and the weather is never cold enough to endanger the lives of the lambs.

I found many flocks of Dorsets about Dorchester. Some of these flocks numbered more than eight hundred. I walked one day across the hills on Druce Farm and looked out over the beautiful pastures of this farm, where over one thousand head of Dorsets were grazing. In one field I saw a band of ewe lambs, several hundred in number, which looked to me like yearlings. These they called their chilver lambs. From them they would pick the following spring the two-tooth ewes which would be added to the flock, always selecting a certain number, which number of chilver lambs had been selected every year since the flock was established. If for any reason the number was not secured in the home flock, the deficit was made up by purchase. Often this plan has led to the retention of most unworthy sheep in the flocks, which at present is the worst evil in Dorset. Those Englishmen are "set in their ways." If you suggest that it would be better to cut the flock rather than use inferior ewes, you would be met by the remark, "I must have *my number*."

The residue of chilver lambs is put on the market,

and if some unsuspecting American, who knows little of Dorsets, comes along, he may be induced to buy some of these culls. I have not found many Englishmen who would tell an American the faults in the sheep to be sold. He must know.

Looking over these large flocks in Dorset, I was



DORSET EWE LAMBS.

impressed with the vigor of the breed. They are the large, strong, motherly ewes that a sheep man knows at once are the kind to raise good lambs. I saw no sheep in England of the many hundreds that held out more promise as lamb raisers. There is a common type of ewe in Dorset that has the mother's look more

distinct than I have ever seen in any other sheep, nor do I believe that this question is ever disputed. It is generally conceded that the Dorset ewe can raise twin lambs as well as most ewes raise single lambs. This is certainly an important point in the mother of the Christmas lamb. Milk is the *sine qua non*.

The breed is held in high esteem in England, and I have always noticed that Englishmen who visit our farms seem especially interested when told that we have Dorsets. They are apt to remark, "Dorsets are profitable sheep," or "Dorsets are great favorites in England." They are very apt to tell, too, of fine Dorset lambs they have seen on the London markets.

The English Dorsets have their faults, but I can say that when you strike such flocks as that of Mr.



"OLD THUNDERBOLT,"

The ram that heads the Edgewood flock; weight, 300 pounds

W. R. Flower, you must admit with the writer that you have never seen a larger number of good sheep in a flock of any breed. It is much harder to get uniformity in the horns in this country than in England, but I think that we have sheep over here more level in back and better in fleece. I do not mean to say that all of our American Dorsets are better in these respects, for unfortunately some very mean sheep have been pushed off on us. May the importers and the men concerned in it be forgiven.

It gives me pleasure to show you some pictures of English ewes, mostly ewe lambs. I have only one photograph of an English ram, and this does not do him justice. I will show you photographs of some American rams. The large ram is now at the head of the Edgewood flock, and is a typical ram of the breed, showing great vigor, abundance of bone and strength to burn.

H. B. ARBUCKLE.

Maxwellton, W. Va.

DRAFT HORSE BREEDING.

Editor Southern Planter:

It has always been a most lamentable fact that our people stray from the fold to worship strange gods. A large number of our Virginia farmers subscribe to agricultural journals published outside of old Virginia, and do not take the SOUTHERN PLANTER. Now, if they are not satisfied with the PLANTER as it is, they should remember that the more subscribers and advertisers the PLANTER gets the better paper they can make, and if all of us lend a helping hand we not only help the PLANTER, but ourselves, the subscribers, much more, and keep our money in our State and help our people. As it is, almost any farmer can get information enough from any single issue of the PLANTER to pay the year's subscription.

But the proverb teaches that "a prophet is not without honor save in his own country," and we see its truth demonstrated almost every day. I do not mean to give the impression that I think the PLANTER is perfect, but is worth much more than its cost, and can, and no doubt will, be improved as its patrons increase.

My first object in writing this communication was to call attention to the fact that now when our farmers are all, or a great number of them, trying to improve their flocks and herds, they are, almost without exception, trying to get something *cheap*. The experience of our most far-seeing and successful breeders has always been that the cheapest stuff was the dearest, in the end. Start right and keep at it, is the only way to attain success in stock breeding, for "if thorns men do not gather figs, neither off a bramble bush gather they grapes."

It is strange, but nevertheless true, that the ordinary farmers will go out and buy a half bred male to breed to. What do they mean? They argue in their simple way that they are making great strides in improving their stock, and if they chance to find a three-fourths bred animal, or one carrying three-fourths pure blood, then they are, to use a slang expression, "strictly in it." Well, if a three-fourths bred animal is better than a half bred, which is true, then why do they hesitate in selecting a pure bred? If they do get a pure bred, why don't they get a first class one, as the motto of every man of good, sound judgment should be "the best is none too good."

In the horse breeding business the case is the same. Why feed "scrubs" or half bred, inferior animals when the same amount of feed, etc., will make you from three to six times the amount of money? We see every year farmers forming clubs to buy stallions of the heavy draft breeds, and instead of buying a

first class stallion in their own State they will go off from home, or get an importer to send a stallion to their neighborhood, the importer taking the chance to form a company and sell the horse. Naturally he puts a double valuation on the animal in order to meet the great expense account that is sure to follow. The importers have a rich harvest every month in the year, gathering large crops of coin from fools, who believe the "rot" talked and written by importers, claiming that the imported article is superior to the home bred. Why should this be true? Does a long sea voyage improve a horse, as it is said to improve whiskey and other liquors? I think not. The oscillation of the vessel on the high seas does help whiskey, but doesn't help a horse.

Did not Col. Holloway breed Clydes in this country that were first prize winners afterwards in the "old country?" The best stud colt ever owned by the noted M. W. Dunham was bred by him, and also a number of his best fillies and mares. I saw an article in a stock journal not long since, written by an importer, who claimed that the French would not breed to a bay Percheron, and that all bays were shipped to the mines, etc. Now, if this be a fact, I could make a fortune in a few years importing these bays to America, where no color is so popular, if I could get them at work horse prices over there. When you hear or read of a man advertising imported horses at one figure and home bred horses at a lower one, just investigate and you will find this fellow is an imposter and speculator, and not a breeder. There are good men in this business, but they are few and hard to find.

They rely usually more on the "slick talking" salesmen they employ than on the breeding and conformation of the horse they have for sale. It is this class of men who make it hard for an honest man to compete with them. Nothing on the farm pays the producer like the best draft horses.

We see every day in the year farmers feeding cattle and horses that eat as much or more than first class animals would fatten on, and still these poor cattle and horses will not bring top figures when made fat.

If a farmer has an extra fine colt it pays to feed him. When I say "feed him" I mean what I say; give him extra attention; all he needs, for if the farmer can "come out" by selling a three-year-old colt for \$75, what will he make by raising and feeding a three-year-old that will fetch \$150 to \$300?

I will quote from the Breeders' Gazette, under date of November 2, 1904: "Demand for heavy draft horses has taken on unwonted activity in the Chicago market very early this season. This demand has ap-

parently been anticipated by the professional feeders, as they seem to have gotten their lots ready ahead of the usual time, and the buyers are on the alert to fill orders at any moment the opportunity occurs. In the market the drafter is in a class by himself. There is no substitute for him, and the man who wants him must have him or do without him. No other horse can fill his place. Therefore, in these days of restricted supply the buyer knows he must buy when the horses are offered; if he does not some one else will, and the chance will be irrevocably lost. In one week in October some very good consignments of finished drafter geldings were sold at the Chicago auctions. An Iowa firm sent in a load in which was a pair of bay geldings which were taken for shipment to Brooklyn at \$700. The team's weight was 4,100 pounds. Harshberger, the Illinois shipper, who holds the price record in Chicago for a full load of 20 at \$300.25, had in a lot of which ten sold at an average of \$325. A pair of black geldings made \$660, another pair \$600, and several more sold singly at from \$300 to \$375 each."

From Live Stock Journal: "The high price of draft horses does not curtail their sales, but the demand is still increasing faster than the supply."

Horse breeding is profitable or unprofitable, according to the kind of horses you breed. The above is indisputable, and the draft horse with size and finish is and always will be in demand.

JOHN F. LEWIS.

Rockingham Co., Va.

INCREASING FARM FLOCKS.

More than a year ago we suggested that those who wanted feeding lambs would not be able to get them from the range much longer at reasonable prices. It was evident that the farming country had become too dependent on the range for feeding stock—and it is clearer than ever now. Last week choice feeding lambs averaging 60 to 65 pounds sold at \$5.75 to \$5.90 in Chicago, a dangerously high price at present cost of feed. The farmer can afford to raise lambs for less than that and sell them to the feeder if he has not grain to fatten them. Indications are that farmers are preparing to do so. Many breeding ewes have been sent to the farms from the ranges during the past six months, and every breeder who has advertised rams has found buyers for them. It is high time to increase farm flocks when range lambs sell above \$5 per hundred weight to feeders.—*National Stockman*.



ANGORAS AT WORK.

ANGORA GOATS.

Editor Southern Planter:

Experience has proven that goats do well and thrive in every part of the world, from South America to Alaska. Some of the finest vineyards in California have been cleared by Angoras. Lands formerly producing nothing but brush, weeds and ferns are now covered with clover and blue grass. An Iowa breeder writes as follows: "Their value as brush cleaners can hardly be estimated. Where three years ago the ground was densely covered with an undergrowth of hazel, crabtree, oak brush and blackberry briars is now transformed into the finest blue grass pasture. At present I have over 600 acres cleared up and reclaimed by Angoras." The average fleece of the Angoras is 4 to 6 pounds each, although I have known them to shear 10 to 16 pounds. The mohair sells for from 30c. to \$4.50 per pound. There is more demand for mohair by the large mills than is produced in the whole of Turkey and the United States.

PROFIT.

A large Angora ranchman in the far West figures the profits on an Angora flock in this way:

Cost of 1,000 15-16 grade does.....	\$5,000
Cost of 20 thoroughbred bucks.....	500

Investment	\$5,500
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RECEIPTS.

4,000 pounds mohair	\$1,200
800 kids increase.....	2,000

Total	\$3,200
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EXPENSES.

Herder, one year	\$ 420
Extra help at kidding and shearing.....	50
Taxes and incidentals.....	50

Total	\$ 520
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Balance net gain.....	\$2,680
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There you have over 47 per cent. on your money.
In this country a man should make 100 per cent. as

we have no wolves, coyotes or bad weather as on the open prairies to get our young kids.

Every farmer and stockman should write the Agricultural Department for their free bulletins, Nos. 27 and 137, on the Angora Goat and The Angora Goat Industry. The Angora goat show at St. Louis was a great show, and more people visited the goat barns than any other stock barns at the show. It was a great advertisement for the industry, and the little silver fleeced animal made thousands of fast friends from all over the world. That magnificent old buck, Kingston Lad, whose mohair sold for four dollars and fifty cents per pound, was there in all his glory. We arranged for several buck kids of his get for our ranch at Rock Cattle. He sheared 18 pounds at \$4.50, making his fleece bring at one shearing \$81. All Virginia farmers should get a few of these little animals as experiments, and just give them a show, and they will prove what they can do, will do, and are doing every day for their owners, in cleaning out brush land and putting money into the pockets of their owners faster than any stock on earth can do it. You don't have to fatten them on corn to send to market, they fatten themselves on brush and the waste of the farm. You don't have to sow grass for them to graze, the brush is their heart's desire, and they live better, thrive better, and pick the leaves off and turn it into gold better, on brush than any grass on earth. If you can't afford to buy thoroughbred Angoras, buy common does and a good Angora buck and grade up by degrees.

The American Stockman says: "Probably at none of the Angora shows have West Virginia and Virginia ever been so well represented as at the St. Louis show. The industry is making great strides in these States, and the best farmers in the country are enthusiastic breeders. Mr. M. S. Valentine, of Rock Castle, Va., and W. R. Jones, of Newport News; J. Walter Winget, of West Virginia; N. Bacon and A. G. Gould, of West Virginia, were among the representatives from these State. M. S. VALENTINE.

Goochland Co., Va.



CLEAR LAKE JUTE SECOND, GRAND CHAMPION AT INTERNATIONAL SHOW, CHICAGO, 1904.

ABERDEEN ANGUS CATTLE.

Editor Southern Planter:

We, as you know, are champions of the Aberdeen Angus cattle. "The breed that beats the record," the black, hornless, low down, blocky beasts that have only been brought to this country in any numbers during the past twenty years. In that time for sixteen consecutive years the highest priced car load of cattle sold on the American markets has been of the Aberdeen Angus breed. Surely this entitles them to the title of "the market toppers." This term and the name Aberdeen Angus mean one and the same thing in the minds of the greatest cattle buyers of this country. They are noted for their ability to put on flesh where it is the most valuable—namely, roasts, sirloin and porterhouse steaks, all the prime cuts, and they finish into the smoothest of all the beef breeds, showing no tendency after being on feed for some time to place their fat in patches and bunches of tallow, and they are the only breed of which this can be said. Wherever exhibited, no matter the amount of competition, the bonnie blacks have always received the larger share of prizes. At the great International Show at Chicago two weeks ago they demonstrated their superiority over all breeds by winning as follows: The champion two-year and the champion half breeds and grades by ages; the two-year-old Clear Lake Jute, 2d, was grand champion. In the car lot classes the champion two-year-olds and the champion yearlings were Angus, and the two-year-olds were grand champions. Even after being slaughtered the champion carcass was an

Angus. Other awards fell to the same breed. In the senior yearlings the Angus grade Victor Zenoleum, champion at Kansas City, was awarded first, and Little Joe, the Hereford grade, that was champion of the grades at St. Louis was second. At the auction sale of cattle on exhibition in the fat classes, Clear Lake Jute, 2d, brought \$36 per hundred. He weighed 1,870 pounds. Value, \$673.20, and only a two-year-old. The champion two-year-old car load sold at \$10.50 per hundred, and the champion yearlings at \$12.25. All of these Angus grades.

What does all this show? To my mind, it shows that the breeders and feeders of Aberdeen Angus cattle must be much better men in their line, or their cattle must be a much better breed of beef cattle than any of the others. We hardly think the Angus feeders and breeders could be called any better than the others, so it must be the cattle.

The original home of the Aberdeen Angus in the Highlands of Scotland has never been called the most fertile country in the world, and, in fact, these cattle have had to put on a maximum amount of flesh on a minimum amount of natural pastures compared to where the other breeds originated. They have done this at home and also in this country. They have demonstrated their ability to beat them all, whether given the best of care or left to rustle for a living. It is said the breed is slowly and surely encroaching on the Shorthorns and Herefords in the range country. The great hind-quarters of the Angus are making them popular with the ranchman, who claims that the other breeds are

becoming thin thighed and otherwise deteriorating on the range, and it is predicted that the Angus will, in not many years, be king of the range, as well as the corn belt.

The Angus has proved, under adverse condition, that the full bloods and grades can rustle for a living, and for this reason are better adapted for the present state and condition of Virginia pastures than any other breeds.

Don't forget they are *hornless*. Just think what that means. No dehorning, no goring, but a quiet, peaceable herd of cattle all one color, not variegated, but uniform, and eighty per cent. of the calves from scrub cows will be hornless, where an Angus bull is used. It is a well known fact that the cattle buyers at the large packing centres are inclined to discriminate against horned cattle, and pay a little more for hornless ones. While no doubt many of your readers are already aware of what I have written, there are others, I am sure, who will be interested in knowing the great value of this breed.

I trust I have not taken up too much space in your valuable paper, and thank you sincerely for the opportunity you give me to say what I know and think about these grand animals. In the words of one of the oldest breeders: "Black, and all black, the Angus 'Doddie' and no surrender." R. L. JAYNES.

Spotsylvania Co., Va.

ABERDEEN ANGUS CATTLE.

Editor Southern Planter:

At Christmas time our thoughts turn from the strife and turmoil of the year that is past, and we see only the "silver lining" of the cloud that has in a measure obscured the sun of prosperity of the cattleman for the past season, as we have every reason to believe that the dawn of a brighter day is just ahead. All breeders will rejoice because of this, and especially breeders of pure bred stock, as they realize that the future of the great live stock interest of America rests upon their efforts, in the production of high class, pure bred sires.

Breeders of Aberdeen Angus cattle, it seems to the writer, have especial cause for congratulation at this time, because of the continued great achievements of the humble "doddie" in the stock shows and sales just past.

When we consider that the numbers of this breed are (amongst recorded cattle) only about one-fifth of the numerical strength of the other leading beef breeds, the past successes of the breed appeal with

greater strength to the mind of the thoughtful breeder. Just consider that for sixteen consecutive years, save one (when the prize was lost only through an age technicality) this breed has furnished the highest priced car load of grade cattle sold in America each year.

That the breed has furnished the highest and second highest priced car load of cattle ever sold.

The highest and second highest single steer ever sold.

Has furnished three out of five of the grand champion steers at the International Show held in Chicago, and more than three-fourths of the carcass prizes at the same show.

Has furnished nearly one-half of all the car loads of fine Christmas cattle exhibited and sold at that great market. The record is indeed wonderful and there must be reasons for this state of affairs. The writer wishes to point out what he believes to be some of the points that have made the breed capable of going on from victory to victory, as it has done.

The Angus, in the first place, owes much to his early environment. Originating in the bleak highlands of Scotland, he was provided by nature with a strong, hardy constitution. He was no son of luxury, but was compelled to seek for his living, developing by this means a strong muscular system and the very best of natural appetite and digestion.

In the second place he has been fortunate in that in his adopted home here he has been the farmers' breed and consequently has not, as a breed, been subjected to the debilitating influences that attend the rich man's favorite, or the pedigree fancier's hobbies. Has been compelled to earn his way, and has been subjected to the rule of the "survival of the fittest."

He cannot boast of "elegant crest," of "magnificent spread of horn," but is just the plain, humble "doddie," a compact, round bodied, short legged, short necked, economical meat producing machine. Breeders of Angus, as a class, are persistent; sticking to their favorites through "good report and bad." Striving to see their weak points and, as best they may, to correct them, and all the time aiming to maintain and strengthen those qualities which have given the "doddie" the well earned title of "Market Toppers." It must be a great pleasure to all lovers of good cattle to note the manner in which this fine breed is pushing its way into every nook and corner of this great country.

Always a favorite in the corn States, they have, in their quiet, unassuming way, pushed westward, until now, even on the great plains at the foot of the Rockies, may be found thousands of these black,

glossy coated beauties, and, too, the writer has heard nothing but praise of them in the stronghold of the magnificent Hereford. In fact, the only complaint is that there are not as yet enough of them.

While the foregoing facts are of general interest, as showing the distribution of the breed, it is of more importance to SOUTHERN PLANTER readers to know that another wing of this black army has for the past few years been quietly stealing into our Southland, and almost before we knew it, they were strongly entrenched in the hearts of Southern stockmen, never to be dislodged. I want to make a plea here to breeders of pure bred Angus in the South. And that is, guard with jealous care the reputation of the great breed of cattle entrusted to your charge. Never let an inferior bull escape your knife. By this means we will build for our favorites a position that can never be shaken.

A. L. FRENCH.

Rockingham Co., N. C.

FARM BUTTER MAKING.

Editor Southern Planter:

My friend, Prof. A. M. Soule, wrote on excellent article on the above subject for the December PLANTER and I want to add a few comments to bring out more fully the farmer's side. The statement which he makes will hardly be questioned, that nearly every farmer makes a different kind of butter from his neighbor, and most frequently it is of an inferior quality. But I must make make some exceptions to the following statement: "On the score of education and lack of facilities for the work, no excuse is available for the inferior quality of butter made on the average farm." Now, as a matter of fact, on the average Southern farm nearly all the butter is made by the ladies. The men have other work to do. These ladies have not been taught in dairy schools. Their information is handed down from parent to child. They have had but little opportunity to learn anything at all about the best methods of butter making. If the ladies are to continue to make the butter on the farm they must have some training. Will a short course in dairying for ladies ever be offered at the V. P. I.?

I think also the farmer has some excuse for the lack of facilities. The average farmer, we will say, has from two to ten cows. He does not feel like paying seventy-five dollars for a hand separator that may not do good work at all, and five to ten dollars for a churn that may be "no good whatever." The farmer is slow to take hold of such things when he

has been deceived in buying worthless washing machines, etc.

Now, what I want Prof. Soule to do for the farmers of Virginia in this connection is to recommend a good hand separator and a good churn, which the farmer "can count on." Are the five or ten dollar separators worth buying? I want a machine myself, but I want the Experiment Station to do the experimenting. I went into what was styled a good dairy school three years ago, and asked which was the best hand separator and the best churn to buy for my use on the farm. I did not get the information I wanted, and I hope Prof. Soule can give us the information now. I have just built an ice house above ground and filled it with good ice. A small dairy building is attached to the ice house, into which the cool water will drain from the ice house, to be used in cooling milk in the summer. Later on I hope to publish in the PLANTER the plan of my building, with results. If it be successful it is a great thing for the farmer, and if it is a failure the loss will be a considerable bill. We need more farm conveniences to make farm life more pleasant and encourage the boy to stay on the farm. The man who will tell us the best way to get them is the one whom we want to hear from.

R. H. PRICE.

Montgomery Co., Va.

WILL IT PAY TO KEEP A RECORD OF FARM ANIMALS?

Editor Southern Planter:

One who has had an opportunity to study conditions as they exist on the average farm cannot be otherwise than surprised that there are not more cases of bankruptcy on the part of those who till the soil than the testimony of the courts show. This conclusion is a natural one, and particularly so if the observer happens to be at all familiar with good business methods. There are not many merchants who would attempt to run a store of any description for a series of years without keeping any record of the stock received and disposed of. The inventory is an important matter to the store-keeper, and he finds it necessary every once in a while to take stock and balance up his accounts to determine how he stands.

On the average farm no attention is given to book-keeping, and it is all a matter of guess work, and hence it is impossible for the farmer to determine what part of his operations pays him best. He knows in a general way, of course, that some crops

are more profitable than others, but just where the difference comes in, it is hard to say. On the other hand, if he kept a record of his operations, and knew exactly what each step in the production of any crop, or in the feeding of any of his animals, cost him, he would get an insight into his business that he could not get in any other way. He would detect hundreds of little leaks which passed unnoticed, but which in the aggregate amount to hundreds of dollars each year, and he would be able to simplify and co-ordinate his business so as to effect small savings in many operations. One of the highest tributes that can be paid to agriculture as a profession is due to the fact that farmers are able to increase their bank accounts from year to year while conducting their operations after such an irrational and uncertain method.

The writer's idea in discussing this subject, however, is not to find fault with what has been done, but rather to point out some reasons why it will be profitable in the future for the farmer to give more attention to the keeping of a careful set of books so as to give him the fullest knowledge and appreciation of his operations, and thus be in position to lop off those things that are unprofitable. Experience indicates that the farmer is sensitive to criticism, and that he often thinks a paper of this kind is aimed at him by persons who think they are mentally superior, or know more than he does. This is an unfortunate conclusion to reach, and it is certainly not justified by the facts in this case.

To improve conditions it is necessary to realize where the shortcoming exists, and then it can be corrected intelligently, and one must of necessity first realize that there is room for improvement before it can be effected. It is also well to state that there are many farmers now giving attention to the keeping of records, who a few years ago spurned the idea. Changed conditions have played an important part in this matter, because increasing competition and the lowering of farm prices have forced them to study new methods of economy. At the same time comparatively little attention has been given to the matter of keeping books on the farm even by those whom circumstances have pressed most closely, and in many instances this is not surprising because the use of the pen becomes a burden to one who is not daily familiar with its use; therefore, strange and unreasonable as it may seem, the farmer has sought to redouble his labors in the endeavor to increase the yields from his land, rather than to study new means of crop fertilization and production to obtain the

same end. Investigation in many lines shows the absolute necessity of keeping a record rather than endeavoring to meet new conditions by greater physical exertions.

A recent trip through the State has impressed some of these facts on the mind of the writer very strongly, though the condition here mentioned are not local by any means. On visiting a number of dairy herds and questioning the owners, it was indeed surprising to learn that nothing was known in a definite way as to the cost of keeping an individual cow. In a general way the farmer thought that he made about \$50 from each individual cow, he was certain though that some paid him much better than others. This was clearly evidenced on an examination of the herd. There were individual cows in this collection that were eating their heads off, while others were making a handsome profit. Altogether the herd was showing a fair profit, but nothing like as much as it should if the weaklings had been weeded out. On suggesting this to the owner, he claimed that it would cost more than it was worth, and that it was too laborious an undertaking. This was simply because of his unbelief in the value of a record. If he could have been induced, like some others, to undertake the work for a little while, he would have seen its necessity, and wondered how he could have gotten along before without definite knowledge of what his animals were doing.

Keeping a record of a herd of dairy cows is not a great undertaking. With a pair of self-recording scales kept at a convenient place in the stable, and with a sample of milk dropped in a quart bottle, from alternate milkings, say about twice a week, a reliable record of the cow can be had, provided the milk is tested by means of the Babcock test once in two weeks, or possibly once a month, and the weight of the individual milkings recorded daily on a sheet kept in the stable for that purpose. It does not take any extra time to do this, as the writer has proven to his own satisfaction over and over again, while the value of the data thus obtained is worth hundreds of dollars to the owner of a large herd of cows. For example, he will find one cow that is giving him only 3 per cent. of fat, while her neighbor is making 5 per cent. on exactly the same feed. He will observe that some of his cows give a large flow of milk throughout the entire lactation period of nine or ten months, while others dry up in from four to six months. Some of his cows grow abnormally fat while others just keep in a desirable condition for dairy animals. He will find some of his cows easy keepers, some hard keepers. One cow will consume

possibly twice as much feed for a given quantity of milk as another, and so the story goes. Thus it is an easy question to determine which individuals in the herd are the profitable ones, and which should be disposed of as quickly as possible.

With an accurate knowledge of the capacity of each individual animal in mind, it is a comparatively simple matter to feed them with skill and economy. Now, it does not seem possible, that when a record can be so easily and simply obtained, that a matter so important and vital to the interests of the dairyman would be overlooked. Yet there are only a very few men who are giving any attention to this very important matter under the mistaken belief that it will not pay them to keep a record.

What has been said in regard to dairying is observed to be true with the feeders of beef animals, and in many instances the farmer has no scales, and in some where he has, does not believe it will pay him to put his animals on them every ten days or two weeks to see exactly what they have done with the food given to them. There are many feeders who are placing twice as much feed before their cattle as they need to obtain a given gain, and these men cannot understand why it costs them so much to fatten their cattle, and why there is no profit in handling beef. The writer has known of a number of instances where from 10 to 15 pounds of corn have been consumed for a pound of gain, which should have been obtained with from three and a half to four pounds of grain. In other words, three times as much grain was being fed in one instance as was necessary to obtain a given gain in another. Thus it is no wonder that the feeders' profit should disappear.

Those who do not keep records say that the farmer cannot afford to weigh the feed to his cows, or to his beef cattle, or, for that matter, to any other class of stock he is keeping on his farm. It is not necessary to weigh it out to the individual animal, and keep as accurate a record as that, but it is a simple matter to have a pair of scales convenient and weigh the grain fed in a graduated measure, and then the amount given each animal can be accurately gauged, and not add to the labor of feeding the animal. What has been said of the grain applies with equal force to the roughness which can be easily approximated if the effort is made, and once these approximations are made the scales will tell the rest of the story.

Undoubtedly twice as much grain is often fed to horses, and from one-third to one-half more roughness than they need to perform certain kinds of work. Many feeders persist in stuffing their animals with

food that simply passes through them undigested, and thus proves a menace to health rather than a benefit. On large farms, grain, particularly corn, is often so abundant that it is not deemed possible to economize in its use. Many others, teamsters especially, believe that 10 to 14 pounds of grain is not half enough to give a mule, though if given this amount of grain with a proper adjustment of the roughness, the animal would keep in good condition and do more work with greater ease than where it receives one-half more grain. The loss from over-feeding is so enormous that it cannot be properly estimated, and it will never be realized until some attempt at keeping a record is made by the farmer. For instance, there are still many who believe that it is a good plan to feed half a bushel of corn a day to steers, and then run hogs after them to utilize the waste, though it is clearly shown by their own practice that they are feeding much more corn than the animals can use to advantage. This seems to be at variance with common sense. It would certainly be better to feed them a proper amount of grain with suitable roughness, so they will eat it up clean and masticate it more slowly, and thus assimilate it thoroughly, rather than to gorge them and run hogs after them to gather up the waste.

Without a record it is impossible to know or to understand the individual idiosyncrasies of animals, yet each animal has an individuality quite as striking as one finds in the case of human beings. This individuality must be thoroughly understood before the animal can be handled intelligently, therefore an individual knowledge of animals constitutes one of the fundamental principles of successful feeding. This adds another reason to the many already advanced for the necessity of keeping a record of the feeding operations on the farm in order that the animals may be properly nourished at a reasonable cost and the immense losses now sustained from over-feeding prevented.

By this means, and this alone, can the drones, which are found on every farm, be recognized and their places filled by profitable animals.

ANDREW M. SOULE.

Virginia Experiment Station.

The South Carolina farmer, or the farmer's wife, with several dozen turkeys and a few bushels of eggs to sell, would be quite happy just now. But they have not got them. What is the use of trying to make only one or two hundred dollars?—*Columbia State.*

The Poultry Yard.

PRACTICAL LIGHT BRAHMAS.

I am a breeder and fancier of Light Brahmas and, having all the faith of a sincere fancier in this breed would like to see that they have their merits sung to the poultry fraternity, along with the cries of approbation for the other sterling breeds. A great many fanciers will report their egg yield and give just the figures with the statement of the number of eggs laid for a given period. This is of no value to the "other fellow." We would all like to know "how he did it." Believing that the following three months' history of a breeding pen of six Light Brahmas (three three-year-old hens, and three pullets) will be of interest to the readers of the *Reliable*, I cheerfully give an account of the exceedingly simple bill of fare and method of treatment for the above pen. This method not only applies to the pen above, but to all my stock.

From the six Light Brahmas mentioned above (three old hens, remember) in the same three months mentioned, I gathered 411 eggs. This was about 4 5-9 eggs per day from six in the pen.

The three pullets had been laying since maturing at six months and were selected for the pen for two reasons. Namely, their laying qualities (handed down by selected breeding for three generations) and the early maturing tendency. We do not think that many Light Brahmas mature until seven months. The six were as near standard as any I have ever had. The three pullets were daughters of the three old hens. They were housed in one pen in one of my buildings, 18 by 30, which is divided into four equal pens. A runway 19 by 30 was all the outdoor space they had. I think there is no other breed of fowls that will thrive on the small city lot like the Light Brahmas. I have never had any trouble with eggs being infertile, although many writers agree in saying that a limited run means infertile eggs.

In the morning as near daylight as possible I throw wheat, buckwheat, and oats in a litter of oat straw about eighteen inches thick. These are alternated, with the exception of oats, which is fed often, about one part of oats to one part of the other grains as a rule. I have greater success with oats as an egg producer than any other grain. Once a week I boil the oats until soft and feed warm at about four o'clock in the afternoon. Twice each week I feed fresh green ground bone. I let them have all they will eat. Any that is left is taken away at once. The bone is always fed in the middle of the afternoon and the fowls have but a light feed of grain at night on some days. On other days they are fed a light feed of grain at five o'clock and at roosting time a mash hot in win-

ter and warm in summer, composed of ground oats, corn, buckwheat and wheat, is fed—about a good tablespoonful to each fowl.

In winter they are given corn on alternate days with the rest of the grains, but in summer there is none fed except what they get in the mash.

I find that the Brahmas eat no more than any other Asiatic fowls and one thing is certain, it is pleasant to go in a pen of fowls and not have them flying all over the house. One remarkable thing to many people about these fowls is that the strain I am trying to perfect are almost non-sitters. This is such a reversal of ordinary ideas that it will seem at first almost incredible when I state that this year to date (July 26) not one has wanted to sit and last year but one hen became broody. I am one of those who claim that with time, perseverance and a little energy, any quality can be bred into or out of a flock of poultry. I believe that I have laid the foundations for a strain of Light Brahmas that are fine layers of very large brown eggs, hens that are not broody, a non-excitable flock, the finest meat in the world, with the least trouble in raising.

It may occur to some one that the reason I do not give the egg record for a longer period is that the laying average decreased. This is not the case; the record given represents the time the breeding pen was mated. After April other hens were allowed access to this pen and the individual record could not be kept for a certainty.

I am an advocate of trap nests as a way to reproduce individual merits. I do not, however, use them, as I never have over six hens with one cock, and with a little observation one can tell from the egg which hen was the layer. This is a simple way and is best where one cannot take time to attend to the trap nests. There are no two eggs exactly alike.

The fowls are housed in warm houses in which lice, filth, vermin and disease are strangers. The sole preventive is the liberal use of the whitewash brush, plenty of tobacco in the nests, convenient dusting boxes with tobacco dust and ashes in them, and absolute cleanliness.

I hope that my experience will prove of benefit to some one.—*W. C. Sleight, in Reliable Poultry Journal.*

When corresponding with advertisers, kindly mention the *SOUTHERN PLANTER*.

The Horse.

NOTES.

Bred and owned by James Cox at Belgravia Farm, Mt. Jackson, Va., there are some half dozen or more of the get of Kelly, 2:27, son of Electioneer, and famous Esther, that are of much promise. In age they range from two to six years old and among them is the fine big gelding Barlight, who stands 16.1 and weighs over 1,200 pounds. Another is the handsome mare Lucy Montrose, 4, 2:26½, trial, whose dam is Minnie Montrose, by Robert McGregor, 2:17½, sire of the champion stallion Crescens, 2:04½. Then there are a couple of well grown two year olds, one of whom is the bay filly registered as Rose Dayton, out of Frances S. Dayton, 2:27½, by Cadmus, Jr., and the other is Sam Pearson, a bay gelding, out of Cherie, by Axteloid. In these you find good looks, size and level heads combined with speed, and Mr. Cox will have them trained and developed this season for the benefit of their sire, Kelly, who was himself very much faster than his record indicates, as he could trot quarters in 32½ seconds—a 2:10 gait—as a three year old.

Among the trotters owned by George W. Watt, a well known bank clerk, of this city, but who resides in Henrico county, are May Chaffin, the bay mare by Norfolk, 3:670, dam Sophie, by Charles, thoroughbred son of Revenue, and two of her foals. One of them is the bay colt Senator, foaled 1903, by Great Stakes, 2:20, and the other is Governess, the black filly, foaled 1902, by Governor B, son of Wilton and Georgette, 2:27, by Count Wilkes. May Chaffin was bred to Great Stakes in 1904. She is a well formed, handsome mare. Her sire, Norfolk, the dead son of the renowned Nutwood, got a race mare in Miss Nelson, 2:11½ who formerly held the record for Virginia bred trotters.

Chorister, Burlington and Cherrywood are the thoroughbred stallions offered for service in this issue of THE PLANTER. They are of fine size and richly bred and each horse has qualifications to recommend them to breeders in general. Chorister heads the Antrim Stud of Dr. James Kerr at Warrenton, Va. He was a great race horse and has attained fame as a sire. Burlington holds court at Woodmonde Farm and is the pride of his owner, J. E. Lane. "The gentleman in black," he was termed while on the turf, so handsome was the black son of Powhatan. Cherrywood, full brother to the famous Morello, is the premier at Bloomingdale. A son of Eolus, than whom it is doubtful if America ever produced a greater sire, and from a noted family on the maternal side, it will be seen that Cherrywood is bred in the purple.

In Prince Henry, the big chestnut son of Patronage and Hazel Eye, by Sir Walter, Jr., L. L. Wallace, of Amelia, Va., offers to breeders a young stallion bred in choice trotting lines. Patronage got Alix, 2:03½, ex-queen of trotters, and is an own brother to the famous sires Patron, 2:14½, and Prodigal, 2:16, while Hazel Eye, dam of Prince Henry, is a daughter of Sir Walter, Jr., who sired the noted New England race mare, Alcitalia, 2:10½. This is stout breeding and with it the son of Patronage has size and a perfect disposition.

Lepanto, son of Petoskey, offered for sale by Bannister & Rhodes, of Roanoke, Va., should find a ready buyer, as he has fine size, an even temper and is a sire of standard speed in Wilkie O'Neill, 2:24½. As a yearling Lepanto created a sensation in Kentucky show rings and swept the board for colts of his age. Though trotting bred he is a clever combination horse, and his get take after him. Write for full particulars about the handsome son of Petoskey.

The racing and breeding interests of James R. Keene, the noted Wall street financier, are in charge of the former Virginians, Major Foxhall A. Daingerfield and James Rowe. Major Daingerfield, who ranks among the best informed students of blood lines and pedigrees in the world, directs affairs at Mr. Keene's great Castleton Stud, Lexington, Ky., while Rowe has charge of the horses in training that are now quartered at Sheepshead Bay, New York. Rowe is a noted trainer. A great lot of stallions and brood mares are owned at Castleton and directed by Major Daingerfield many grand race horses have been bred there during the last decade or more.

J. H. Wingate, of Roanoke, Va., owns the good brood mare, Stamboulaine, by Stamboula, son of Stamboul, 2:07½, dam Jessie, by Bayard, also her foal of 1902, a nice filly, by Tearoleon, 2:08½. Stamboulaine was bred in 1904 to Lepanto, son of Petoskey. Capt. Cook, the gray gelding, by Jack Cook, out of Stamboulaine, now owned by George W. Payne, of Roanoke, was also bred by Mr. Wingate and with proper handling is likely to make a trotter.

Among the trotters that are being wintered by Wilton Greenway, Towson, Md., are six of the get of Red Leo, 2:26½, all bred and owned by S. Walton, Falls Mills, Va. They are Margie Z, 2:17½; Charles Leo, 2:29½; and Little Flaxie, all of whom are out of Carina, by Caliban; Edna V. B. and Lou Z., who are out of Tea Rose, dam of Hearoleon, 2:8½, by Mecca, and Red Lutie, whose dam is Lutie Dawson, 2:20, by Jack Dawson, 2:17½.

BROAD ROCK.

Miscellaneous.

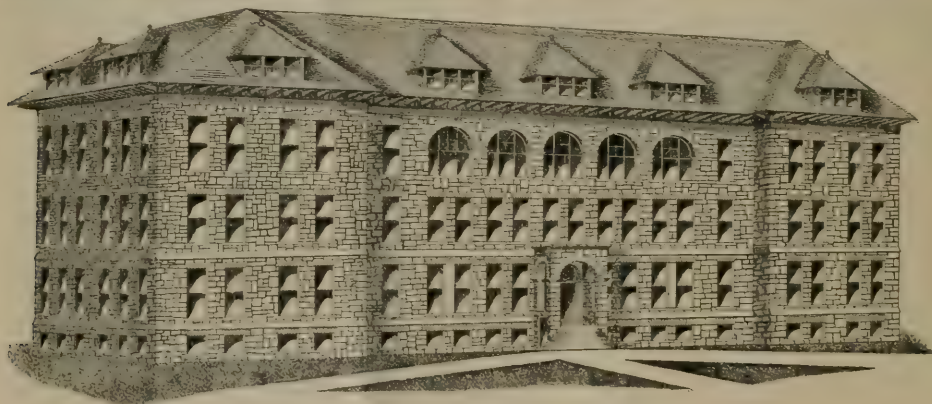
A NEW BUILDING FOR THE VIRGINIA COLLEGE OF AGRICULTURE.

Editor Southern Planter:

Plans have recently been completed and the work of construction commenced on the new Agricultural Hall for the Virginia College of Agriculture and Agricultural Experiment Station located at Blacksburg, Virginia. By way of explanation it is proper to state that the College of Agriculture and Experiment Station constitute together one of the principal departments of the Virginia Polytechnic Institute, which now occupies a leading position among Southern schools of technology, thanks to the able and efficient

eral construction will be of the natural limestone rock obtained in quarries adjacent to the College, while the trimmings will be made of Brush Mountain sandstone. The building will thus be a product of Virginia soils and ingenuity from beginning to end, the plans and specifications having been prepared by the Engineering Department of the Institute. The size of the building will be better appreciated by the fact that it contains fifty-five thousand feet of floor space. It is of slow burning construction, and is provided with flues for forced draught ventilation.

In the rear of the building a battery of five green-houses will be constructed, providing facilities for



NEW AGRICULTURAL BUILDING, BLACKSBURG, VA.

direction of its affairs by President J. M. McBryde.

The erection of this fine and commodious building was made possible through the liberal appropriation made by the last State Assembly. The elevation of the building, as shown by the accompanying half-tone, while attractive is not showy, though it will be substantial in appearance and of sufficient size to house the various departments of instruction it is designed to accommodate. It will be exceptionally well lighted, and sufficient funds are available to thoroughly equip it for both instruction and research work. This building will stand for new ideals in agricultural education in Virginia, and when it is completed will provide as fine facilities for agricultural training and investigation as the most exacting could wish.

As the elevation indicates, the building will be practically five stories high, one hundred and seventy feet in length, and seventy feet wide. The gen-

work in horticulture, entomology, bacteriology, and mycology. The heating and cold storage plant will also be situated in the rear, though there will be a battery of butter and cheese curing rooms in the basement of the central building. A barn for stock judging and veterinary clinics will also be erected, and if the College grows rapidly and the Legislature will provide the means, it is contemplated in the future to erect two large wings in rear of the present structure for the accommodation of additional instructors in animal husbandry, veterinary science and farm mechanics.

The dairy department will occupy the basement, which will be provided with cement floors. Glazed tiling will be used for the wainscoting in the basement, and the machinery will be run from the floor so as to avoid any jarring in the building, which might otherwise disturb the scientific workers. Power will be furnished by both steam and electricity. The dairy

department will occupy about eleven thousand feet of floor space so that a large number of students can be employed at one time. Instruction will be provided in receiving, handling and separating milk, the ripening, churning and storage of butter, milk testing, the manufacturing and curing of cheese, and the pasteurizing of milk and cream.

The first floor will contain the administrative offices, the library, bulletin and mailing rooms, and laboratories and class rooms for animal husbandry and seed investigations. The second floor will be occupied by the departments of horticulture, veterinary science and mycology. Over four thousand feet of space will be utilized by the departments of horticulture and veterinary science respectively, and twenty-five hundred feet by the department of mycology. The laboratories and class rooms for instruction and research in agronomy, bacteriology, entomology and soil investigations will be situated on the third floor. While on the fourth floor will be placed the museum, assembly hall, rooms for the agricultural club and the laboratories for photography. The museum proper will be of rather general nature, for the plan is to place the department museums in the class rooms and laboratories throughout the building. In other words, provision has been made for the construction of a series of glass cases wherever wall space is available, so that the material used in the laboratory of animal husbandry, for example, will be at the instructor's elbow, so to speak, and before the eyes of the students all the time. Thus whenever it is necessary to call attention to any fact that can only be demonstrated satisfactorily by museum specimens, it will not be necessary for the instructor to take his class to the museum, or go to the trouble and labor of bringing the specimens to them. This, it is believed, will add greatly to the value of the instruction and at the same time simplify the work of the teacher.

Ample provision has been made for every feature of agricultural instruction, and each department represented has a special suite of rooms and private laboratories which will be used specifically for purpose of investigation.

The building will be lighted by electricity and heated by steam, and as the drainage will be carried by the general College system of sewers, good sanitation is assured.

There is at present a fair proportion of the students in the College taking the agricultural course. The completion of the new building is being looked forward to with great interest by these young men. It is believed that its erection marks a new era in the agricultural work of the institution, standing as it

will for the highest ideals in agricultural education. The boys of Virginia can find now at home facilities for obtaining knowledge relative to agriculture equal, and in many instances superior, to those provided elsewhere; and the influence emanating from the College certainly should help to create and renew interest in agricultural pursuits and at the same time disseminate and establish the true relation of scientific facts to modern agricultural progress.

ANDREW M. SOULE, *Dean and Director.*

Blacksburg, Va., Dec. 12, 1904.

THE PROSPERITY OF THE FARMER.

Editor Southern Planter:

Prosperity will not be confined to the farmers but will extend more or less to all classes. There will be in the next five years, higher and lower prices, for farmers' products as large or small crops shall prevail, but the trend will all the time be in favor of higher and better prices. Never again are we likely to see twenty-five cent corn or fifty cent wheat or anything like it. Land which always moves slowly has begun to feel the effect of present conditions. It is slowly but surely rising and it will continue to rise. The farmers will probably be more benefited than any other class of society. The cause of this prosperity does not appear to be understood and yet it is plain to those who have made an intelligent investigation of the subject.

The steady increase in the world's output and production of gold for the last eight years has been and is the true cause. Considered in the aggregate the advance has in that time been phenomenal, and it is emphasized by the fact that the output of gold for the present year, 1904, it is said, will amount to over three hundred and fifty millions of dollars. Think for a moment of this enormous increase and remember the fact that practically it is indestructible and the cause of high prices is largely shown. And that which emphasizes it still more and adds to the permanency of the rise is the important fact that the increase in all human probability, while it will be gradual, will continue for many years. It is highly probable that in less than eight years' time the world's output of gold will reach, if it does not exceed, five hundred millions of dollars. No fact in finance, or political economy is better settled than the statement that as the purchasing power of gold decreases, prices will rise in the same proportion. This may be considered an axiom, and as gold increases, its intrinsic value diminishes, and this fact is illustrated in the higher price of all products, and this factor is continually at work. It illustrates the strength of the position of

that class of financiers who always advocated the quantitative theory of money. There is now no necessity for free silver, or bimetallism, as it is more appropriately termed. The same result has been obtained by the increase of the world's output of gold which would have been obtained by the remonetization of silver. The great hand of Providence has given us this beneficent blessing. It has added, and will continue to add enormously to our material prosperity. The prospect before the farmer is better and brighter than at any time before in his history. A careful study of the subject satisfies me that farming ought to rank as one of the learned professions. Agricultural Colleges should confer diplomas as is done in both law and medicine, and the study of agricultural chemistry should be fostered and encouraged in the highest degree. The present use of commercial fertilizers is almost a relic of barbarism. Every farmer should buy the ingredients and mix his own fertilizers. He should have the soil of his farm analyzed and buy what it needs. England, France and Germany have for several years practically abandoned the purchase of prepared commercial fertilizers. They purchase the ingredients, mainly three things: Ammonia, potash and the superphosphate of lime, and mix them themselves in accordance with the wants of the soil and the particular crops they cultivate. If the farmer will recollect the simple fact that all soils, the poorest gaul, or gully, and the richest alluvial soil on James river low grounds contain exactly the same qualities with the exception of only three things, namely: Ammonia, potash and phosphoric acid, he will have learned a lesson and a fact the importance of which it is difficult to over-estimate. Beneficent advantages in the last few years seems to have come to the farmer with great rapidity. The use of electricity in its application to farming is daily growing in importance, and the automobile is probably destined to become a great factor in settling the great problem of the transportation of freight. They will force good roads and the recent experience of France teaches that their charge for freight is cheaper than the railways, though the building of automobiles for freight is yet in its infancy. There is certainly no room for the pessimist among the farmers of our great country and especially Virginia, and those persons will be wise who will avail themselves of the opportunity to purchase Virginia land at the present low price, for that will soon rise to fall no more in the present generation. I conclude this paper by the statement of one more significant fact, and it is this: The farmers have yet to learn that "in union there is strength."

CAMM PATTESON.

Sunnyside Place, Buckingham Co., Va.

The only analysis of soil which can be of any help to the farmer is one made by himself by experimenting in the growing of crops with different chemical plant food in different proportions on the land itself. Laboratory analysis of soils has proven of no value in actual practise. The chemist can ascertain what is in the soil but cannot determine its availability for feeding the crop.—Ed.

SEED CORN.

Editor Southern Planter:

I read Prof. A. M. Soule's article asking for samples of wheat and corn grown in Virginia. I can say this from experience, that we can grow as fine corn in Virginia as I have ever seen. About twenty years ago I lived in Chesterfield county. I wanted a good corn to grow on the river. The White Gourd seed is a very fine corn but will not stand getting wet in an overflow after it matures. It will soon sour and rot. I sent to the North and got a bushel of the best Yellow Flint corn I could find. The ears were small, only about six inches long, with only eight rows to the ears. It did not grow as tall as our Virginia White corn and had a small red cob and small short grains. I had it shelled and mixed with a like quantity of Virginia Gourd seed, with large grains, about half an inch long and very large ears. This corn was planted on James river low grounds, and it produced a large, Yellow Dent corn with a small red cob with a shuck that shut up very tight, and the ears would stand being overflowed by high water two or three times without rotting. This corn weighed, when dry in the following spring, 60 pounds to the bushel, and it ripened in 90 days from planting. This corn became very popular and I sold seed from it nearly all over the State, and it is still being planted in this vicinity. It has more oil in it, and is greatly relished by stock, is sweeter and richer than white corn, it also grows well on high land.

About ten years or more ago, Mr. Editor, you gave me a bag of large red cob white corn that some one sent you from North Carolina. I planted it and it grew the largest and longest ears of white corn I ever saw. This corn was planted in Henrico county. I saved seed from it for several years, and then moved to Hanover county and lost my seed, and have not planted any of that kind since. I find it pays well to select your seed corn and I shall try hereafter to be more careful about my seed. Corn is easily mixed, but by being careful you can pick out your seed of the same kind every year.

F. GUY.

Henrico Co., Va.

THE Southern Planter

PUBLISHED BY
THE SOUTHERN PLANTER PUBLISHING CO.,
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.
B. MORGAN SHEPHERD,
Business Manager.

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Rate card furnished on application.

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THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

WE INVITE FARMERS to write us on any agricultural topics. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known. Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

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RICHMOND, VA.

Entered at the Post-office, Richmond Va., as second-class matter.

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To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month.

MAGAZINES.

From the point of view of uniqueness the star article in The Century for January is Helen Keller's "Chat About the Hand," illustrated with numerous photographs of Miss Keller alone or in company with various friends—Mr. Jefferson, Dr. Hale, Prof. Bell and her devoted teacher, Miss Sullivan. Miss Keller's article is an anomaly in literature, being an account by one who is deaf, dumb and blind of the way in which she uses the hands as a medium of communication. Her impressions of people, her literary skill, and her cheerful philosophy of life are alike amazing. Following it is a poem by Richard Watson Gilder, entitled "Two Optimists," being a letter to Joseph Jefferson acknowledging a copy of Helen Keller's essay on optimism.

Andrew D. White, in his reminiscences of his diplomatic life, resumes the narrative of the Embassy at Berlin, and presents a number of topics interesting to his countrymen, including the visit to Germany of the President and Mrs. Harrison.

Prof. Henry Fairfield Oesborn, in his group of papers on "Fossil Wonders of the West," deals with "Ichthyosaurs." The illustrations include famous specimens of ichthyosaurs recently secured by the American Museum, and a restoration of the ichthyosaur made under the direction of Prof. Osborn by Charles R. Knight, all of which add to a paper of curious interest in popular science. Randall Blackshaw contributes an article on "London in Transformation," with pictures by Birch B. Long, showing that London, like New York, has entered upon a new era of building. "At the Sale of the Unredeemed," by Albert Bigelow Paine, illustrated by Orson Lowell, is a study of the pawnbroker auctions of New York.

Besides the second part of "Sandy," by Mrs. Alice Hegon Rice, author of "Mrs. Wiggs" and "Lovey Mary," there are seven short stories: "The Cicatrice," by Gouverneur Morris, illustrated by Guipon; "The Case Went Up," by Clarne Gray; "The Man the Consul Protected," by Benjamin H. Ridgely, with sketches by Steele; "The Scientist and the Moth," by Jennette Lee; "Evelina's Return," by Chapin Howard, with a drawing by Miss Bredin; "Daddy Billy's Juno," by Susan Teackle Moore, and "Captain Keigh-

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St. Louis, 1904.

OUR NEW QUARTER-CENTURY SEED BOOK, celebrating the twenty-fifth anniversary of our business, is now ready for distribution. It is the most valuable publication of its kind issued, and should be in the hands of every southern farmer and gardener. Customers of last year will receive it without applying; to any one else interested, it will be mailed upon request.

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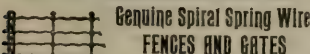
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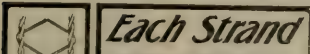
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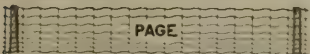
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PAGE

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WIRE FENCE at Wholesale, A 4'-in. stock fence 20¢ per rod. Send for prices and FREE catalogue of Wire Fence and full line of Fence supplies. **W. H. MASON & CO., Box 80 Leesburg, Ohio.**

ley's Men," by Harvey J. O'Higgins, illustrated by Justice.

Notably rich in illustrations, the January St. Nicholas sets a very high standard for the numbers to follow through 1905—surely no children's magazine before ever had such delightful stories and pictures and jingles.

The magic of L. Frank Baum's pen and Richardson's jolly pictures, even in the early chapters, have proved "Queen Zixi of Ix," a fairy tale far out of the ordinary. Joseph H. Adams' "The Practical Boy" is proving a delight to handy and active lads, and Charles H. Caffin's "How to Study Pictures" is of profit and pleasure to grown-up lovers of pictures as well as to young folks. These three serial features would of themselves make this a banner year for St. Nicholas; but they are only a part of the store of good things each number brings.

The American Monthly Review of Reviews for January, 1905, contains several features of exceptional interest. Dr. E. J. Dillon, the well known British journalist and magazine writer, in a paper written from St. Petersburg, presents a graphic and searching analysis of the liberal progress in Russia, especially the zemstvo crisis. There is a series of three strong articles on Pittsburg as a new American great city. William Lucien Scalf writes on "Pittsburg's Basic Industry—Steel"; J. E. McKirdy describes the city as an industrial and commercial centre, and Burd Shippen Patterson presents the æsthetic and intellectual side of Pittsburg. The series is copiously illustrated with views, processes and portraits. The outlook for American labor in the coming year, as shown in a sketch of the personality and plans of Samuel Gompers, president of the American Federation of Labor, is given (with a portrait of Mr. Gompers), by Dr. Walter E. Weyl. Mr. Ernest Knauff contributes an interpretative study, with pictures, of the comparative exhibition of American and European paintings recently held in New York, and there is a helpful informing article on transliteration from the Russian under the title "English Spelling of Russian Words," by Herman Rosenthal, of the New York Public Library. Austria proper and Bohemia are considered in the series of articles running in the Review of Reviews on what the people read in various countries. In this number there are also produced a number of Russian and Japanese popular war pictures, with explanatory text. Then there are the regular departments: "The Progress of the World," the "Record of Current Events," "Cartoons," "Leading Articles of the Month," "Briefer Notes on Topics in the Periodicals," and "Book Notices." This is a special fiction review number of the magazine, and, in addition to the regular section devoted to noticing the serious books of the month, there are

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eight pages of novels reviewed, with many portraits and other illustrations.

Field and Stream, the leading American magazine for sportsmen, offers the famous sporting pictures by Charles H. Pancoast, "To Hit is History" and "To Miss is Mystery," free with yearly subscriptions. The prints are in full color, 11x18 inches in size, and few pictures are more suitable for the sportsman's office, den or home. For 1905, Field and Stream announces a splendid list of well illustrated stories of the rod, gun, camera and cruise, with plenty of humor and hundreds of pictures.

Send \$1.50 to Field and Stream, 35 West 21st street, New York, for the next twelve numbers. Should you wish a sample copy, send 10 cents in coin or stamps, and, in addition, a miniature reproduction of the companion prints will be sent.

AMERICAN FOREST CONGRESS.
Washington, D. C., January 2, 3, 4, 5, 6, 1905.

Address all communications to Wm. L. Hall, Secretary Committee of Arrangements, Atlantic Building, Washington, D. C.

Official Call.—An American Forest Congress under the auspices of the American Forestry Association will meet in Washington, D. C., January 2 to 6, 1905.

The purpose of this Congress is to establish a broader understanding of the forest in its relation to the great industries depending upon it; to advance the conservative use of forest resources for both the present and the future need of these industries; to stimulate and unite all efforts to perpetuate the forest as a permanent resource of the nation.

All who are interested in securing these ends are urged to attend this Congress.

The fact that the President of the United States will address the Congress and receive its members is significant of its national importance, while the promised attendance of many of the foremost men of our industrial life assures definite and far-reaching results from its deliberations.

HIGHLY PROBABLE.

"Are you wondering, dearest," whispered E. John Bentley to Edith McGonnipul, as for one brief moment he tore his lips from hers, "whether the man in the moon saw me kissing you?"

"No, John," she replied, "I have no doubt on that point, but I am wondering whether he heard you?"—November Woman's Home Companion.

"This race problem is a dreadful thing," "Yes," answered young Mrs. Torkins; "whenever I see Charley get a pencil and begin to figure on the entries in a race, I know there is going to be trouble."



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Calendar

DISAPPOINTMENTS IN RURAL FREE DELIVERY.

Observation shows that some of the rosy dreams indulged in by the promoters of rural free delivery have not been realized in actual results.

This perhaps could have been expected. Too much is usually claimed in advance for these innovations—even the most valuable of them. Novelties are always attractive. A combination suit-case, fire-escape and graphophone always appeals to the credulity of those persons who are ever on the lookout for something new and startling.

The distribution of mail matter to the agricultural population was a scheme so attractive as to command in advance the enthusiastic plaudits of all who wished well for the growing intelligence of the country. That some prophecies have not been fulfilled is no impeachment of its general utility, but is simply an incentive to more careful administration and a proper adjustment to the necessities of the case.

The farmers, and such periodicals as are printed for the purpose of reflecting their views, already criticize the rural service for some of its unexpected shortcomings. They point out that when it was started, the country was honey-combed with star routes, and every man was within convenient distance of a postoffice. It is asserted that the postal system, instead of being amended and enlarged, is being torn up by the roots. Postoffices which had existed for years and still served their purpose were threatened with extinction, compelling the people to accept the rural delivery whether they wished to accept it or not, and giving the favor on these terms to only a small proportion of the population.

One objector says "Where heretofore every soul was satisfied, no serious complaints coming from any quarter, vast multitudes of people are now so greatly disturbed at the ill-advised changes made or threatened that the country is filled with excitement and lamentations."

The destruction of the old system by shutting up postoffices in the rural communities, and having the mail delivered wholly from the larger towns was one of the results of the rural delivery scheme which the people were not prepared for, although it was made a leading argument in its favor. To compel farmers to do their business, including the purchase of stamps and money orders, registering letters, and other things of that kind in the public roads in all sorts of weather, where they previously had a convenient office under shelter, is denounced as a glaring injustice.

One incident of a populous county is given, where after several years of free delivery there were still 150 postoffices, of which 17 were starting

TRY THIS MILL

10 Days Free.

I will send any reasonable farmer one of

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Latest Double Cut,
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Feed Grinders

On Ten Days Trial—No Money In Advance.

If it does not grind at least 20% more ear-corn or other grain than any other two horse sweep mill made, send it back at my expense. Don't miss this offer. Ball-bearing throughout. Only 101 lb. sweep. Light draft. Grinding rings never heat. Each other—they last for years. Both grinders revolve; self-cleaning. Ask for new Catalogue.

G. M. Ditto, Box 43 Joliet, Ill.



ON CONDITION

Free trial given at your home. If you don't grind more feed and do it easier, better and faster with a



New Holland Feed Mill

than any other, return and we pay all expense. We ask you to test on ear and shelled corn, all grains and mixed feed stuffs. Three styles, four sizes, including small hand power. Write today and ask about our horse-saving **WOOD Saws** in sizes 12 to 12 h.p. Booklet free.

NEW HOLLAND MCH. CO.,
Box 153, New Holland, Pa.



Quaker City Grinding Mill.

For Corn and Cobs, Feed and Table Meal.

Send for all mills advertised; keep the best and return all others. Built in sizes. 1 to 20 horse power. Ball bearing, easy running. Freight paid. Send for our 38th Annual Catalogue. It's free.

The A.W. Straub Co., 377 Elm St., Philadelphia, Pa.
The A.W. Straub Co., 47-49 Canal St., Chicago, Ill.

FOR ALL MIXED FEEDS

Unhusked corn, husked ears, shelled corn and all grains there is no mill made that for speed, easy running and complete grinding equals the



Free Catalogue

THE O. S. KELLY CO., 159 N. Lime St., Springfield, Ohio

DEHORNING STOPS LOSS

It costs with horns an enormous and a constant menace to persons and other cattle. Dehorn them quickly and with little pain with a **KEYSTONE DEHORNER**. All over in moments. Not a harsh method. Leaves a clear, clean cut. Cows give more milk; steers make better beef; and for free booklet, M. T. Phillips, Box 45, Pomeroy, Pa.



A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

HENCH'S 20th Century Steel Ball Coupling Cultivator

With Double Row Corn Planter and Fertilizer Attachment Complete on One Machine.



Order immediately and introduce them in next season. The HENCH & DROMGOLD CO. Mfrs., York, Pa.



Don't buy a horse until you read full description of **The Cahoon**

It has accurate and positive **Discharge** Lasts a lifetime and is the **Wagon** of the future. Write now to **GOODELL COMPANY, 63 Main Street, Boston, N.H.**

Clark's Tools for Large Hay Crops



Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the subsoil water. It is an excellent machine for covering in sugar cane. Strength guaranteed.

Can plow a newly cut forest, stump, bush, or bog land, leaves land true, clean for any crop.

Clark's Double Action Cutaway

Harrows moves 15,000 tons of

arls in a day.

Send for Circulars.

Clark's Rev. Sulky Disc Plow



Made single or double. One or two furrows deep: 14 to ten inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar

plow made. When Clark's grass tools are used as directed in his grass circular, we, the C. H. Co., guarantee them to kill wild mustard, charlock, hard back, sunflower, milk weed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seedling to grass.

THE CUTAWAY HARROW CO.

Higgenum, Ct., U. S. A.



The Best Cooking Range Made,
Sold for Cash
or on Monthly
Payments

**\$10 to \$20
Saved.**

FREIGHT PAID.

Your money
refunded after
six months' trial if

Clapp's Ideal Steel Range

is not 50 per cent better than others. My superior location on Lake Erie, where iron, steel, coal, freights and skilled labor are cheaper and best, enables me to furnish a TOP NOT H Steel Range at a clean saving of \$10 to \$20. Send for free catalogues of five distinct lines, over 50 styles and sizes, with or without reservoir, for city, town or country use. CHESTER D. CLAPP, 247 Lynn St., Toledo, O. (PRACTICAL STOVE AND RANGE MAN.)



PATENT YOUR IDEAS

\$100,000 offered for our invention; \$8,500 for another. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.

CHANDLER & CHANDLER, Patent Attorneys
976 F Street, Washington, D. C.



TELEPHONES

and line material for
FARMERS' LINES

So simple you can build your own line. Instruction book and price list free.

The Williams Telephone & Supply Co.,
66 Central Ave., Cleveland, O.

Mention THE SOUTHERN PLANTER in writing.

points for rural routes. There are in all 33 such routes, the carriers traveling a distance of 800 miles a day in the aggregate.

The original intention was to close most of the offices, thus, it was alleged, saving money enough to largely provide for the expense of the rural carriers. So far in that county only two of the old offices have been actually wiped out. They are kept open and running. Nearly all of the old star routes are retained. This offers a duplicate service at an immense additional cost, with little increase in efficiency, yet bringing many heart-burnings and neighborhood quarrels.

The effort was made early in its history to have the delivery service placed on a contract basis, similar to that of the star routes, so that there would be competition between carriers as there now is between mail contractors. This plan was strongly supported, but was defeated by a large majority in Congress.

One representative, advocating the plan, warned his colleagues that the time would soon come when there would be 50,000 carriers, at \$1,000 each per year, total \$50,000,000 for salaries alone, besides allowances for wagon repairs, horse hire, &c., plus 8 hours a day and millions for overtime. He predicted a solid combination of 50,000 carriers, clamoring for more pay, and organized as an aggressive political machine.

None of these predictions has yet been realized, but it cannot be denied that some tendencies are more or less ominous. Carrirs' salaries were increased at the last session of Congress from \$600 to \$720 per annum. Further increases will be asked and when the labors and hardships of the rural carrier are contrasted with the light duties and 8 hours' tour of his city brother, there seems to be some merit in the demand for a compensation more nearly equal.

There are causes of friction among the patrons of the service in addition to those we have mentioned. The fact is, that the system has been built up so rapidly that the advance theories have not as yet had time to adjust themselves to unexpected conditions, and unforeseen obstacles. The postal scandal, which involved the principle organizer and promoter of rural free delivery inside the Department, and led to his separation from the service, necessarily complicated an already difficult situation. The administrative problems had to be taken up and solved by new men, and the service suffered a serious setback from that cause.

One by one vital questions will come up for solution which will require the highest wisdom both in Congress and the Department to settle properly. No Congress nor the Department will possess that wisdom unless they are assisted by observant

THE IMPROVED SCREW STUMP PULLER

Write for Prices.



Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

Stump and Tree Pullers

Self-anchoring and Stump-an-bored. Something new. Pull an ordinary stump in 10 minutes. 1 to 5 acres at a sitting. Different sizes to suit all kinds of clearings. For illustrated catalog address

**Powerful,
Handy,
Low
Priced.**



Milne Mfg. Co., 834 Ninth St., Monmouth, Ill.

HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centerville, Iowa.



The Monarch Stump Puller.

The best on earth; you make no mistake in buying of a man of 5 years experience in pulling stumps. We set up the Puller and guarantee satisfaction before we want your money. 5 sizes. Write for catalog and prices.

JOS. W. RITCHIE, State Agent, R. F. D. No. 39, Groton, Va.

STUMP PULLERS

SEVEN SIZES

\$1750 UP

DEPT. F. W. SMITH CRUBBER CO. LACROSSE WIS.

WE PAY THE HIGHEST

CATALOG

FREE

For Sale or Trade.

A Western threshing outfit, 12 horse power, good traction engine and a fine Case Separator. One year used. Price very reasonable. Will trade for cattle, horses or land.

MEYER & JEHNE, Farmville, Va.

ENGINES; 13 Horse Traction \$250; 10 Horse Traction \$300; Boilers, Engines new and used and hand from 4 to 100 Horse. Single saw mill \$125; Double mill \$150; Machinery of every description at one-third actual value.
D. CASEY, Springfield, Ohio.

Champion 1905 Calendar Lithographed in 10 Colors

Size, 14 x 21 inches.



Ask the
Champion Agent
for this beautiful
Calendar

Triune Fruit and Produce Co.

— WHOLESALE —

COMMISSION MERCHANTS,

18 Reanoke Dock, - - NORFOLK, VIRGINIA.

Wanted to buy

EGGS AND POULTRY.

CORRESPONDENCE SOLICITED.

MARKET QUOTATIONS ON APPLICATION.

Reference: Mercantile Bank of Norfolk, Va.

WARRIERS CHAIN HANGING STANCHION

CLEAN SAFE DURABLE AND COMFORTABLE

WALLACE B. CRUMB, FORESTVILLE, CONN.
P. O. BOX 422

and intelligent patrons of the rural service—the farmers themselves. The SENTRY believes thoroughly in the curative power of an intelligent public opinion. It is the duty of the press and of all educational agencies to encourage this opinion in the direction of genuine and permanent reform. In no direction can that opinion now be better concentrated than in improving and perfecting the rural free delivery service.

THE SENTRY.

FREE MULBERRY TREES FOR NORTH CAROLINA FARMERS.

The past several seasons' experience in silk-growing in North Carolina has demonstrated that the women and children of this State may by light and interesting work during six weeks of early summer, and without interfering seriously with the ordinary duties, each earn from \$30.00 to \$40.00. Those who can devote more time to the work may earn more. Every pound of silk cocoons grown in North Carolina in 1904 has been sold at 90 cents to \$1.00 per pound.

It is necessary to increase the available supply of silk-worm food. Every farm and village lot in North Carolina, having dry soil, should have at least 100 trees.

The fruit of seedling mulberries is excellent for poultry and hogs. The roots spread widely near the surface of the soil and will prevent even steep hillsides from washing. We recommend that farmers plant seedling mulberries 12x12 feet apart, permitting the plants to branch low. Use the field as a run for poultry or hogs and allow the children of the family to have the leaves for feeding silk-worms as a source of pocket money.

In order to encourage the planting of the white mulberry, the North Carolina Department of Agriculture will distribute during the fall of 1904, among the farmers of the State, rooted seedling trees in lots of 50 and 100. Not more than 100 will be sent to one person. Recipients of trees will be required to pay postage or expressage at the rate of one cent per tree. This amount must be enclosed with application. Send stamps or money order—not bank checks.

Address applications to and make money orders payable to the undersigned.

GERALD MC CARTHY,

Biologist,

N. C. Department of Agriculture,
Raleigh, N. C.

Skinflint—If anything should happen to me, dearest, you will be all right. I've just assured my life.

But suppose nothing does happen to you?

Madue—Physical Culture is just splendid. I'm taking beauty exercises.

Majorie—You haven't been taking them long, have you?"

PLANTERS,

farmers, ginners, cane grinders
and loathers desiring a convenient
and highly efficient power.
Nothing equals this little outfit.

Leffel Engines

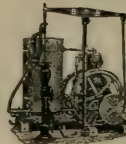
and boilers are the standards of
excellence where engines are. They
find a host of uses on plantation
and farm and are so reasonable
in price as to come within reach
of all. We make them like cut,
horizontal, mounted, etc., from
3 H. P. up. Write today telling
us what you wish a power for and we will mail you free, our
book entitled, "Power Economy and Efficiency."
James Leffel & Co., Box 134, Springfield, Ohio.



Our Gasoline Engines

Are the simplest built, having no valves. Will
give more power for their size than any
others built. Prices, 3 horse power, \$100;
6 H. P. double cylinder, \$200.

SOUTHERN MACHINE MANUFACTURING CO.,
731 E. Cary Street, Richmond, Va.



Save Dealer's Profits

Buy direct, vertical, hor-
izontal and portable gas-
oline engines. We sell a
4 Cycle 2 H. P. Engine \$85.
Other sizes in proportion.
Pumping outfit a special-
ity. **BAUKOTH BROS.,** 50-55
Fisher St., S. Springfield, O.

One Horse Tread Power

FOR SALE; also one 14 inch CUTTING BO-
with extra knives, operated by hand or
power. Both machines in perfect order. Ad-
dress **W. H. SCHROM, Branchville, Md.**

. DON'T LOAF. THIS WINTER.

Country salesmen wanted. We teach art of
selling, pay commission, and guarantee sal-
ary. Great opportunity for young farmers
and teachers to learn business. **J. B. CRAB-
TREE, Richmond, Va.**

Position Wanted

by married man, no family, as working fore-
man or farm manager; prefer poultry raising.
Understands his business in all its branches.
References given. **E. ALLISON, Box 83,
Ardley, N. Y.**

VIRGINIA DIVISION.

FARMER'S MUTUAL ASSOCIATION.
Chartered by State of Virginia.

A Fire Insurance Association for Farmers of
Eastern Virginia.

Organized January 9, 1893; amount insured
January 9, 1904, \$400,000; policies secured by
real and personal property, estimated value,
\$1,000,000. Send for statement of plan and book
of membership to **CHAS. N. FRIEND, Gen-
eral Agent, Chester, Va.**

YOU CAN MAKE \$3 TO \$10 A DAY
fitting planes for us. Big profits.
Our 24-page FREE EYE BOOK
tells how. Write for it today.

**JACKSONIAN OPTICAL COLLEGE, Dept 2093,
Jackson, Mich.**

Genuine



Imported

PERUVIAN GUANO,

The Richest Fertilizer Known,
Contains 1,600 pounds PLANT
FOOD IN EVERY TON.

A fine natural bird manure.
ABSOLUTELY PURE AND NOT MANIPULATED.
Never has been Equalled.
Never will be Equalled.

GUARANTEED ANALYSIS;

Chincha: 8.30 per cent. Ammonia. 3.60 per cent.
9.00 per cent. Avail. Phos. Acid. 23.00 per cent.
2.00 per cent. Potash (K2O). 4.25 per cent.
Inquire of your DEALER; If he has not
got it, write to

EDMUND MORTIMER & CO., SMITH-DAVIS CO.,
17 William St., N. Y. Wilmington, N. C.

SHIPMENTS FROM NORFOLK, WILMINGTON.
You can buy it at about State Valuation.

... Improve Your Land With ...

Agricultural Lime

We have the best goods at
bottom prices.

Shipments made in ANY
QUANTITY desired.

T. C. ANDREWS & CO.,

Norfolk, Va.

GIBSON'S

LIQUID

LICE KILLER

Kills Lice on Fowls, Cattle, Hogs and Horses.

Easily Applied, and Sure Death to all Lice.

Your Money Refunded if it Fails.

Write for Circulars and Agents' terms.

Half gallon can, 60c.; gallon can, \$1.00.

GIBSON & LAMB, West Alexander, Pa

WANTED,

A gardener on a gentleman's estate. Single,
a good vegetable grower, and some knowledge
of flowers, etc. In making application, state
age, nationality, experience, wages required
and references. H. C. GROOME, Warrenton,
Va.

WITH THE ADVERTISERS.

In this issue will be found the advertisements of the leading stockmen, merchants and agricultural implement dealers in this country. We beg to suggest that our readers preserve this issue, as it is a veritable buyers' guide, and will be sure to come in very handy later on in the year.

Among the new advertisers in this issue is the Whalebone Carriage and Harness Mfg. Co. Buggies at farmers' prices are offered.

The Banta Mfg. Co. offers its well known Orms Incubator.

The German Kali Works have a very interesting half page announcement elsewhere in this issue.

The Fruit Grower Co. are advertising their splendid paper, the Western Fruit Grower. Look up the ad and send for a sample copy.

The W. Smith Grubber Co. have a couple of ads in this issue, to which attention is invited. They have a splendid stump puller, and parties needing such a machine are requested to refer to these ads.

The Chilean Nitrate Works have a very interesting argument on another page as to the use of Nitrate of Soda.

The Smith Manure Spreader Co. has an attractive announcement on another page. Look up this ad and send for information in regard to the great Western manure spreader.

The Goodell Co. are advertising their well known Cahoon Seed Sower as usual this season.

The Iowa Incubator, the one without any cold corners, is offered to poultrymen in this issue.

Be sure to send for one of the beautiful calendars offered by the International Harvester Company.

The "Planet, Jr.," implements, more up to date than ever, are offered in an attractive announcement by S. L. Allen & Co., on another page.

Chas. A. Cyphers would like to mail his incubator catalogue to interested parties. Look up the ad.

The Rochester Spray Pump Co. have an attractive offer to agents of their well known Kant Klog Sprayers.

The Sure Hatch Incubator Co. has a large and attractive ad on another page, to which the attention of all poultrymen is invited.

The Syracuse Chilled Plow Co. have a couple of ads in this issue. Thousands of our readers know this plow from having used it for years.

The Ames Plow Co. begin the season's advertising with this issue. Up-to-date market gardeners' tools are offered.

The Milne Mfg. Co. are advertising their well known stump pullers in another column.

Mr. A. L. French has an attractive card of his Sunny Home herd of Aberdeen Angus cattle in this issue on another page.

Lee's Prepared Agricultural Lime is offered as usual this season by A. S. Lee & Sons.

Walter D. Moses & Co., proprietors

Bad grocer
confesses his
badness by selling
bad lamp-
chimneys.

MACBETH.

You need to know how to manage your
lamps to have comfort with them at small cost.
Better read my Index; I send it free.

MACBETH, Pittsburgh.

MONEY SAVED

DO YOU EVER INTEND TO BUY A PIANO? If so, read this and buy now. Never before have you had as fine an opportunity to buy a fine piano at such a great sacrifice of price. We are to take inventory and must reduce our immense stock. Here is your life's chance. Look at these prices:

A fine \$500 upright.....	\$345
A fine \$450 upright.....	\$322.50
A fine \$400 upright.....	295
A fine \$350 upright.....	225

Square pianos at your own prices from \$30 to \$100. Organs from \$20 to \$55. Write us to-day for full information and catalogues.

WALTER D. MOSES & CO.,

108 E. Broad street, Richmond, Va.

ESTABLISHED 1879.

Oldest Music House in Virginia.

Make Your Idle Money Earn You Interest.

Write the **FIRST NATIONAL BANK of RICHMOND, VIRGINIA** for information concerning its certificate of deposit, so arranged that one per cent. may be collected every **FOUR MONTHS** through your nearest bank or store.

Our experience proves this form for savings to be the most satisfactory plan yet devised for deposits of \$100.00 or more.

Our Capital and Surplus is

ONE MILLION DOLLARS.

JOHN B. PURCELL, President.

JNO. M. MILLER, Jr., Vice-Pres. & Cashier.

CHAS. R. BURNETT, Assistant Cashier.

J. C. JOPLIN, Assistant Cashier

GINSENG & RAW FURS

Wanted; full value for your goods. Write for price list. Address H. C. MYTCALF, Alstead, N. H.

Northern Virginia Farms

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 5—136 acres; half timber, balance cleared; 11-12 miles from station. Good 7 room house; large barn; good water. Price, \$2,900.

No. 16—130 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$20 per acre.

No. 40—125 acres. Two and one-half miles from station. Forty acres timber, balance cleared. Fine land. In good condition. Good 7 room house. Large barn, etc. Price, \$20 per acre.

No. 41—133 acres; one mile from town, on fine McAdam road. Nice 7 room house, 3 porches. Good well and springs. Good barn, with stalls for 10 cows and 5 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land is richly loam and clay. Two acres in orchard; trees in full bearing. Price, \$6,000.

No. 41—26 acres; 10 miles from Washington, D. C.; 2 miles from an electric and steam railroad. Thirteen room house in nice shaded lawn, 2 cellars, well at house. Nice orchard, in full bearing. All necessary out buildings in good repair. Price, \$3,500.

No. 43—20 acres; an elegant brown stone house, with 3 rooms, 2 porches. Three acres young orchard, in full bearing. All necessary out buildings, in good repair. A large stone mill building, with 2 sets of corn burrs, has 20 foot water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$3,200.

No. 47—100 acres; 1-2 miles from railroad; 90 acres cleared, all level and in fine state of cultivation. New 5 room house. Stable for 4 horses and 6 cows. Young orchard. Good well at house. Situated on popular dirt pike. In Loudoun county. Price, \$2,500.

No. 48—225 acres in Loudoun county; 20 acres in hardwood timber, balance cleared and in fine state of cultivation, nearly all in grass. A new 7 room house with well at door; 2 1/2 miles from the railroad. In refined neighborhood. Land smooth and a little rolling. Close to school and churches. Price, \$200.00 per acre.

No. 50—480 acres in Loudoun county, in the best grazing section of the State, all to grass; 12 room residence, situated on elevated ground in a large shaded lawn. An elegant large orchard in full bearing. Stabling for 60 cattle, farm grazed and fattened 65 export cattle last season. Well fenced, and an abundance of running water. Price, \$44.00 per acre.

No. 51—212 acres; 25 acres in timber. Land at the fine state of cultivation, mostly in grass. Small house on farm. Good well and several never failing streams. Situated on a broad McAdams pike. Close to schools, churches, P. O. and store, in a refined section. Price, \$3,800.

Write for full information, and price list of other farms.

W. E. MILLER, Herndon, Va.

VIRGINIA . . . AND . . . FIND THE BEST HOMES

Where Health, Climate, Soil, Location and markets are unsurpassed. Any place, where and price to suit the buyer of a stock truck, fruit poultry or fish and oyster farm. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 36 p. pamphlet giving full particulars.

W. A. PARSONS,

C. & D. Main St. Depot, - - Richmond, Va.
ESTABLISHED 1876.

of the oldest music house in Virginia, have an ad in another column, which is sure to interest numbers of our readers.

The Belyeu-Russell Level Co. are offering their Farm Level in an attractive ad in this issue.

Gibson & Lamb are advertising their disinfectants and insecticides with us again, this season.

The Cardwell Machine Co. have a half page ad elsewhere in this number. This company builds and repairs almost all kinds of farm machines.

Samuel Hairston, proprietor of Oak Hill Farm, is offering a splendid lot of stock in this issue.

Bossart & Co. are offering their Curine Remedies in this issue.

Peruvian Guano of very high analysis and very low price is offered by the Smith-Davis Co.

Mr. Murray Boocock, proprietor of Castalia Herefords, has an attractive page ad elsewhere in this issue.

THE LOSS FROM STRIKES.

The statistics on this subject show a loss to the country from strikes that is simply appalling. We, who are so familiar with the word "strike" that we scarcely give it a second glance while reading our papers, have not the slightest conception of the vast amount of money that has been lost through labor disturbances.

Available figures show that in the twenty years between 1881 and 1900 there were 22,793 strikes, which cost the country in wages, expenses and direct loss of trade the enormous sum of \$396,769,392! During the same period there were 1,005 lockouts, costing \$199,189, making a total of \$468,968,581!

Here is a loss of almost half a billion dollars figured from three items only—that is, loss of wages, assistance, or money advanced to strikers by their sympathizers, and loss to employers. It would be a fair computation to estimate an equal sum lost directly and indirectly by the general public because of the strikes.

Total, one billion dollars in twenty years!—November *Woman's Home Companion*.

FONTAINE SAFETY THUGS.

The Fontaine Co., which has been advertising its useful harness device for several months, sends us circulars calling attention to its endorsement by the Society for the Prevention of Cruelty to Animals of Richmond, and Dr. Lankford, President of the Board of Health of Norfolk, Va. Look up the ad on another page.

Tess—I've just begun to read that novel you loaned me.

Jess—Oh, have you? It's queer the way the first chapter opens, isn't it?

Tess—I haven't come to that yet.

My wife talks to herself all the time. Is that so? I wish mine would.

IMPORTANT To Land-Owners.

Do you realize the importance of having a good map or plot of your land? I make a specialty of copying worn and faded farm, town lot and other maps, and to making maps and plots from metes and bounds as described in deeds. If you want old maps copied, mail to me, or if you want a map made from your deed, copy metes and bounds and mail to me.

DON'T PUT IT OFF.

After you have lost your old maps or they have become too badly torn and faded, it will be too late.

SPECIAL ATTENTION given to surveying and dividing large tracts of land in Virginia and North Carolina. My charges are: For maps, \$2 and up, according to size, and \$1 and up for calculating area. Mail me what you want done, and I will quote you price for same. DAVID T. WILLIAMS, Civil Engineer and Surveyor, 336 Main street, Danville, Va.

Desirable Farm,

With Unsurpassed . . .
Educational Facilities.

201 acres in the Bright Tobacco Section of Prince Edward county, for sale, within 400 yards of old historic Hampden-Sidney College. One-half of land clear and under active cultivation. This farm is fenced in with celebrated Styron Fence with cedar pickets, and is equipped with the most modern farming implements. Ten room house, with office in yard; also stable, cow shed, good well and ice house, with a spring of mineral water near by. The macadamized road connecting Farmville and Hampden-Sidney, runs through the place. Having educated my boys, I intend to leave the county, and will sell cheap my furniture, horses, cows, farming implements and farm. Address MARY C. REYNOLDS, Hampden-Sidney, Va.

On account of poor health, I will sell my valuable

1,000 Acre Farm,

which is well adapted to stock, hay, pasture, small grain, corn and cotton; two-thirds under cultivation and in pasture; one-third in nice marketable timber, pine, poplar, oak, gum, ash, persimmon and cypress; new, modern, 9-room dwelling, 3 tenant houses, 2 new and 2 old barns, and other outbuildings, 3 miles from railroad; dairy mill; one-fourth mile from church, schools, cotton gins, saw and grist mills; thrifty village, 7 miles from city; wharf on river. If desired, will sell 75 head of Jersey and Holstein cattle. Will sell farm for half its value.

W. H. BUFFKIN,

XOG 237

Elizabeth City, N. C.

To Home Seekers

"Virginia, Her Agricultural and Industrial Resources," is the title of a new pamphlet issued by the Norfolk & Western Railway Co. We will gladly send you a copy. F. H. LA BAUME, Agr. and Ind. Agent, Roanoke, Va.

VIRGINIA PROPERTY

FOR SALE ON EASY TERMS.
Fine 228 acre farm, \$39,000. House, 3 tenant houses, large basement, barn, silo, ice house and dairy outbuildings; good fence; plenty fine water; 23 milk cows, bull, 5 heifers, 2 horses and 3 wagons; all kinds of machinery, separator and dairy equipment. \$500 income a month. If sold right away will take \$9,000 for everything just as it stands stacked, or will sell on easy terms. One mile from railroad station and small town. Send for catalogue of 50 other farms. \$500 up. All the above is near steam and electric railroad, and near Washington, D. C. J. P. JERMAN, Fairfax, Va. Phone connection.

WE CAN SELL

YOUR FARM

NO SALE, NO CHARGE.

If you want to buy, write for free catalogue.

R. B. CHAFFIN & CO., Inc., Richmond, Va.

Northern Virginia,

Grain, Fruit, Dairy and Blue Grass Farms of every Class within one hour of Washington, D. C.

LOUDOUN COUNTY
Farms a Specialty
Catalogue on application.

P. B. BUELL & SON,

Real Estate Brokers,
Herndon, Fairfax Co., Va.

OLD VIRGINIA

FARMS of every description. Good lands. Low prices. Liberal terms. Convenient to churches, schools and railroads. A very mild climate. Write for our new catalogue. VIRGINIA LAND AGENCY, Hockaday, Casselman & Co., Managers, Richmond, Va. P. O. Box 257.

FOR SALE

one store house 22x41 on lot 50x100 feet. Poultry yard enclosed. 2 lots 80x100 feet each; Blacksmith's shop 20x30 feet, and stable. Garden lot enclosed. G. W. HARDY, Jeffress, Va. (Southern Railway.)

••• VIRGINIA FARMS •••

Nice little poultry farm, 100 acres, good house and orchard, \$500.00. Blue Grass, Stock and Fruit Farms. Address PORTER & GATER, Loudon, Va.

Go South.

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in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near game markets, with best educational advantages. For further information, address

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Homes for ALL. Health for ALL. Happiness and Independence for ALL. ALL sizes of FARMS at corresponding prices, but ALL reasonable.

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\$3 PER ACRE AND UPWARDS
EASY PAYMENTS. CATALOGUE FREE

GEO. E. CRAWFORD & CO., Richmond, Va.
Established 1875.

BILTMORE BERKSHIRES.

Biltmore Farms announce their fifth annual sale in a full page advertisement, which gives a rough idea of the character of the offering. They look for a most successful one for many reasons. First of all, the demand at present for Berkshires of the right kind seems to be very active—in fact, for the last few weeks the farms have sold double what they sold for the corresponding period last year. Since the 15th of November the following sales have been made, among others:

Mr. Bona Allen, Georgia, boar and sow; Mr. E. B. Moore, North Carolina, sow; Mr. R. J. Casseberry, Pennsylvania, boar; Mr. W. P. Smith, Mississippi, boar; Mr. C. E. Stahle, Pennsylvania, boar; Mr. M. W. Hanna, North Carolina, boar; Mr. E. G. Duncan, Tennessee, sow; Mr. Wm. B. Os-good Field, New York, boar; Dellhurst Farms, Ohio, boar; H. W. Hopkins, two boars and one sow; J. P. O'Hara, New York, boar; J. Krantz & Son, Ohio, boar; Mr. G. C. Bennett, Tennessee, sow; Mr. Charles J. Metz, North Carolina, three boars; Mr. Graham F. Blandy, Virginia, four sows; Mr. O. W. Rogers, Georgia, boar, and Mr. W. H. Van Cleave, Ohio, boar. Whilst a number of these, as will be seen, have gone to old customers, for we want them to feel that they can always get in on the ground floor, and will command our best efforts. The health of the herd is perfect. We don't like to talk about this without touching wood, for we know that good luck has something to do with this, as well as our very careful system of quarantining on separate farms for all introduced animals. Perhaps another reason is the favorable location here. Surrounding our hog farm is a wide, safety belt of territory controlled by the estate, in which no hogs are raised except a few pen hogs for home consumption. That is a good protection. There are many herds, where careful quarantine regulations are enforced and the utmost care used in every way, but we are every now and then hearing of one of them being cleaned out from one end to the other with hog cholera, and this is one of the many things that helps the breeders who are not affected by this calamity, as it increases his market for healthy hogs. There is no doubt that the Berkshire is probably the best adapted of all hogs to the conditions to be met with among the majority of stock raisers, and is certainly the favorite with packers and with the judges in the fat stock shows, who are generally practical buyers themselves. At the great St. Louis Exposition they led all other hogs in quality and number, and it is practically the same at every large State fair, and we must not fail to mention the Georgia State Fair at Macon last November, when there were about 200 very good Berkshires shown, and the other breeds were much in the minority. The most important hog sale in England was probably that of Mr. Arthur Hitchcock, Jr., who has gener-



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Learn from expert orchardists, berry-growers, spraying authorities and other practical men whose experience ranks them as authorities in fruit culture.

Such men are regular contributors to that "handsonest of farm papers"

THE FRUIT-GROWER
ST JOSEPH, MISSOURI
50c A YEAR

Never dry or sleepy, always "meaty" and wide awake. During 1905 Special Editions will be devoted to "Spraying," "Gardening," "Small Fruits" and "Apples." Our two Jonathan series of 10 fruit booklets on "Orcharding," "Small Fruits," etc., at 25c each, are dollar makers for fruit-growers. Ask how to get them free. Send 25c and names of 10 persons interested in fruit-growing for a year's trial. *Eastern Edition for States east of Ohio.*
THE FRUIT-GROWER CO.
932 S. 7th, St. Joseph, Mo.

"Crop Growing and Crop Feeding."

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383 Pp. Cloth, \$1.00; Paper, 50c.

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or the treatment of the LIQUOR, OPIUM, MORPHINE and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion.

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The best locations, choicest lands in Virginia. Grains, Grasses, Fruit, Poultry, Dairy, Stock. For catalogue and further information, address

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I Can Sell Your Farm....

If located in one of these Virginia counties: Prince George, Chesterfield, King William, Gloucester, New Kent, King and Queen, Hanover. Send description, stating price.

JOHN JELINEK, 1116 Pine Alley,
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BLUE RIBBON SEEDS

WERE AWARDED THE

GOLD MEDAL

at Louisiana Purchase Exposition
ST. LOUIS, 1904.

Our New Catalogue issued in January will contain full information about improved Seeds, Crops, Culture and valuable hints to farmers and gardeners.

Mailed Free if you mention this paper.
WOOD-STUBBS & COMPANY, Seedsmen, Louisville, Ky.

Emporia Nurseries

are now offering at reasonable prices No. 1. APPLE TREES, 1 and 2 yr., mostly late kinds, of high grade stock, which is being praised as the **FINEST STOCK EVER OFFERED IN THIS COUNTRY.** KIEFFER PEARS, 1 and 2 yr., GRAPE VINES, SHADE TREES, PEACH, PLUM, MICHAEL'S EARLY STRAWBERRY, the best early berry, at \$1.25 per 1,000; 25c. per 100; Apple, 4 to 5 ft., 10c. each; \$8 per 100; Apple and Peach, as above, 5 ft. up, 15c.; 10 per 100; Kieffer Pear, 6 ft., 50c., or \$5 dozen; Botton Plum, 4 to 5 ft., 25c.; \$15 per 100; Concord, 1 yr. Cottonwood Shade Tree, 5 ft. up, 25c., Niagara and Worden Grape, 2 yr., \$5 per 100; or \$10 per 100. We can ship any time. Send money with order to insure prompt filling.

EMPORIA NURSERIES,
Emporia, Va.

Trees - Trees

I offer a fine lot of whole root trees.

APPLES, PEARS, PEACHES,
CHERRIES, PLUMS, GRAPE
VINES, RASPBERRIES, Etc.

Save agent's commission by sending your order to the nursery.
CATALOGUE FREE. All Stock Inspected and Fumigated.

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Largest Peach Tree Growers

IN THE SOUTH.

Write for our new illustrated and descriptive catalogue of general Nursery Stock.

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Chattanooga, Tenn.

Alfalfa Seed IN CTS. LB.
INOCULATED ALFALFA SOIL, 75c. 100
lbs.; \$10 a ton. RECORDED HEREFORDS,
almost beef prices. J. N. SHIRLEY,
Lebanon, Ind.

ally held the record for public auction, and who sells annually both Berkshires and Yorkshires. With a representative crowd of the prominent breeders present, the prices that the Berkshires brought were nearly twice the average of the white breed, and the agricultural papers in commenting upon this, said: "Evidently the South does not want white pigs." We came to the same conclusion long ago with reference to the Eastern and Southern States preferring the good grazing qualities and large litters, with larger percentage of proportional lean meat of the Berkshire breed. Of course we try to do a little better each year—that is, to eliminate combinations of blood lines that don't "nick" and mate and breed more to those families which have proven to make a good combination, and we have materially improved the conditions under which the hogs have been kept by being able to give them a more extended range on green crops, especially on alfalfa and clover; good feed, such as the best shorts and bran (which will probably never be much cheaper, and which makes it a losing investment to turn out pigs at what they are now bringing in the markets unless one can ease up on the expensive side of the account by this means). Our pigs are still running out on the green sod, and to-day are hunting the grass through the snow, taking plenty of exercise after the few green blades which they can still find, with a liberal ration of white shorts, bran, skim milk and a little whole corn when it is very cold. We feel confident that pigs that are being scattered so widely in this centre will help the interest in this breed and increase their reputation as the "farmer's hog." Whilst we have been raising Berkshires here for about ten years, there has been such demand for them at private sale that it has been previously quite impossible to offer 50 to 60 from the top of the herd without breaking up our business for some time to come. There has always been, and will be yet, a demand for freshly imported blood to furnish outcrosses to the American families in order to add quality and early maturity. For the past three years we have, therefore, been forced to import for these sales, and it is now with great pleasure that we are able to offer sixty tops that are either imported in dam or bred directly to imported stock. That we can let these go without weakening the herd is insured by the large number of fine young litters that are coming on from the old matrons of the herd. These sows should certainly prove the most profitable lot that have ever been dispersed at public auction. Selections from them will make an outcross for almost any line of breeding, and as they have never been subject to the trying trip and quarantine which lies between American and English herds, and have been developed under the most favorable conditions, they have the best chance possible to pro-

Diggs & Beadles,

Reliable Seeds,

have established for themselves a most enviable reputation. If you have never used them, ask your neighbors what they think of DIGGS & BEADLES' seeds. A trial order will convince you that the quality of our seeds cannot be surpassed, and our prices are most reasonable. Write for our new illustrated catalogue. It is mailed free, and is very useful to the farmer and gardener.

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PEAS FOR SALE.

1,000 bushels Black Peas, \$1.35.
2,000 bushels of Whip-Poor-Will, \$1.35.
200 bushels of Red Ripper, \$1.35.
1,000 bushels of Soja Beans, \$1.35.
2,000 bushels Mixed Peas, \$1.30.
2,000 bushels of Clay Peas, \$1.35.
500 bushels New Era, \$1.60.
500 bushels of Brown Eyed Whites, \$1.65.
500 bushels of Black Eyed Whites, \$1.75.
All our peas are 1904 crop, re-cleaned, sacked in even weight 120 pound sacks.

These prices are f. o. b. Hickory, and subject to market changes.

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1,000,000 Cabbage Plants

for sale by Alfred Jouannet, Mount Pleasant, S. C. Varieties: CHARLESTON WAKE-FIELD, SUCCESSION. Plants hardy, young, medium size. Price, cash, f. o. b. Charleston, \$1.25 per 1,000; \$1 above 5,000. Special price on large lots.

STRAWBERRY PLANTS

45 Varieties
A vigorous, healthy, well-rooted plant is more certain to live, grow much faster, less liable to disease. This is the kind of plants I furnish my customers; 25 years' experience. Lucretia and Austin Dewberry Plants, Asparagus Roots, Seed Corn, Second-crop Seed Potatoes, etc. Descriptive catalogue

True to Name free.

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Strawberry Plants, Trees, etc.

\$1.60 buys 1,000 nice young STRAWBERRY PLANTS, and if you are not satisfied with them, you can get your money back. Send for free catalogue. JOHN LIGHTFOOT, R. F. D. 2, Sherman Heights, Tenn.

For Potato Growers

We have a carload of fine WISCONSIN SEED IRISH POTATOES on hand, which we sell in large and small quantities, at very reasonable prices, delivered at any station or landing. MEYER & JEHNE, Farmville, Va.

..Second Hand Bags..

Wanted. Any kind, any quantity, anywhere. I pay the freight. GEO. T. KING, Richmond, Va.

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Bone Spavin, Bog Spavin, Ringbone or any kind of blemish—we have what you need to make a certain cure. Guaranteed always—money right back if it ever fails.

Fleming's Spavin Cure (Liquid)

for the soft bunches—Paste for the hard ones. A 45-minute application and the lameness goes. Lots of blemish information in the free book we send.

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Do yourself what horse doctors charge big prices for trying to do. Cure Fistula or Poll Evil in fifteen to thirty days.

Fleming's Fistula & Poll Evil Cure is a wonder—guaranteed to cure any case—money back if it fails. No cutting—no scar. Leaves the horse sound and smooth. Write for our free book on diseases and blemishes of horses.

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A SAFE AND POSITIVE Cure for Spavin, Splints, Curbs, Ringbones, Bony Growths, Rheumatism, Spring knees, Lameness of all kinds, etc.

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NEWTON'S Cough, Croup, Diarrhoea and Indigestion Cure. A certain specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can. Dealers. Mail or C.O.D. The Newton Remedy Co., Toledo, Ohio.

NO MORE BLIND HORSES.

For Specific Optalmia, Moon Blindness, and other Sore Eyes, Barry Co., Iowa City, Ia. have a sure cure.

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We want to buy

Some Good Timberland

(White Oak preferred, but also Pine and other kinds of timber), no matter how large and how small tracts are. MEYER & JEHN, Farmville, Va.

Wanted

GOOD, SOUND HORSE, suitable for buggy and surrey, in exchange for a good UPRIGHT PIANO Address Horse, care Southern Planter.

duce large and even litters. It is pretty well proven that the size of the litter, as well as its evenness, is not only determined by family traits, but is also determined by the treatment that the brood sow experiences.

The catalogue of this fifth annual sale will be mailed shortly after the first, and the breeders will find it interesting reading, and should apply for one.

REPORTS.

United States Department of Agriculture, Washington, D. C. Bureau of Chemistry. Bulletin No. 88. The Chemical Composition of Apples and Cider.

Bureau of Forestry. Progress Report on the Strength of Structural Timber.

Bureau of Soils. Bulletin No. 24. The Centrifugal Method of Mechanical Soil Analysis.

Bureau of Statistics. Bulletin 30. International Sugar Situation.

Farmers' Bulletin No. 208. Varieties of Fruit Recommended for Planting.

Farmers' Bulletin 211. The Use of Paris Green in Controlling the Cotton Boll Weevil.

Maryland Experiment Station, College Park, Md. Bulletin 96. Sweet Corn Breeding, Growing and Curing for Seed.

Bulletin 97. The Relative Profits of Selling Milk, Cream and Butter.

Bulletin 98. Home Grown Protein as a Substitute for Purchased Feeds and Tests of Soling Crops. Agricultural Quarterly, November, 1904. Seed Testing.

Tennessee Experiment Station, Knoxville, Tenn. Bulletin, Vol. XVII, July, 1904. Training and Pruning Trees and Vines.

Bulletin, Vol. XVII, October, 1904. Replacing Grain with Alfalfa in a Ration for Dairy Cows.

Michigan Experiment Station, Agricultural College, Mich. Bulletin 219. Soil Moisture. Its Importance and Management.

Bulletin 220. Dried Beet Pulp and Dried Molasses for Fattening Sheep.

New Hampshire Experiment Station, Durham, N. H. Bulletin 114. The Babcock Test for New Hampshire Farmers.

Rhode Island Experiment Station, Kingston, R. I. Seventeenth Annual Report, etc.

Bulletin 102. Commercial Fertilizers.

Virginia (Hampton Institute) Nature Study Bureau. Sheltering Live Stock in Winter.

Virginia Weather Service, Richmond, Va. Report for November, 1904.

We acknowledge receipt of three interesting pamphlets issued by the Rockbridge Lime and Stone Co., Lexington, Va. This firm has a quarter page ad in this issue, and the attention of our readers is invited to it.

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lamenesses from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. ¹⁰Send for descriptive circulars, testimonials, etc. Address

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SINGING BIRDS, FINE BRED FOWLS, CAGES, FIGURINES, DOGS, PET ANIMALS, GOLD FISH, AQUARIUMS, DOG AND BIRD FOODS, MEDICINES, ETC.

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WANTED,

- 1 Feg. Shropshire Buck (2 yrs. old).
- 2 Grade Shropshire Ewes (1 to 2 yrs. old).
- 6 Choice M. B. Turkey Hens,
- 2 Choice Angora Does,
- 1 Choice Toulouse Gander,
- 3 Choice Toulouse Geese,
- 1 Choice Muscovy Drake (Black and White),
- 6 Choice Muscovy Ducks,
- 1 Choice Mammoth Pekin Drake,
- 6 Choice Mammoth Pekin Ducks,
- 1 Choice White Wyandotte Rooster,
- 6 Choice White Wyandotte Hens.

For breeders—no show. Give prices crated and express or freight rate to Richmond. Va. Address "CASH," Southern Planter office.

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ALL KINDS OF LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes Etc.

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I Will Teach You the

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Winners of 385 First Prizes. A phenomenal record of successes in the hands of poultry-raisers. The machines that insure success. Would you like to know about them? Write for beautifully illustrated free catalogue.

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tell how to make money—How to raise young chicks for early spring markets when prices are high. How to make a profit on ducks. How to feed for heavy flocks. How to make hens lay. Why not get an adequate return from poultry? Why not try modern methods this year? Why not learn about incubators and brooders from a firm who have been in business since 1890 and who know how to make satisfactory machines. Write us for the book today. It is free.

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YOU CAN BUILD IT YOURSELF
We tell you how to do it, show views of machines built at home and many letters from satisfied customers. In our new book "How to Make and Save Money with Incubators and Brooders" Full of good hints. Insure the title to the owner. You save half the cost of a machine. None better. Get the book and know for yourself it's free.

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**EASY AND SURE PROFITS FROM THE lowa ROUND Incubator.**

Simple to operate. Cheap in fuel. Perfect heat to the chicks. Thousands testify to its outstanding qualities. These facts are in the Descriptive Catalogue FREE for ask to be.

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100 Egg Incubator,

made by George H. Stahl, for sale, or will exchange for pure-bred Poultry or Poland China Pigs. Machine as good as new; only used one season.

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A VALUABLE FARMER'S SAWING MACHINE.

In all industries there are pieces of machinery that refuse to go out even after they have had their day. The wood sawyer's occupation is one of these industries. We cannot help wondering why the old cross-cut saw still continues in use in some localities when so much more can be accomplished with such a piece of machinery as the Folding Sawing Machine. The cross-cut saw requires two men. Running it is slow, laborious work. Only one man is required to operate this machine, and he actually saws more and does it easier than the two men do the old way. Every day, therefore, this simple Folding Sawing Machine, whose first cost is small, saves more than one day's wages. It is manufactured by the Folding Sawing Machine Company, Chicago, who are advertising it in our columns. Any reader with sawing to do should write the company for particulars.

We are very pleased to know that Prince Rupert, 8th, son of Prince Rupert, owned by Mr. Ed. Gay Butler, of Ansefied Farms, won the first prize in the 2 year old class for Hereford bulls at the International Show held in Chicago December 1st. Prince Rupert is a grand old sire, and Mr. Butler can offer some of his get at right prices. Look up his ad.

In writing mention Southern Planter

**OLD TRUSTY**

In First Rank the First Year.

Incubator Johnson's 12 years making 50,000 other incubators put it there.

40 DAYS TRIAL. 5 YR. GUARANTEE.

The Incubator Johnson has new patents. He'll tell you in a personal letter what "Old Trusty" is. His big Catalogue and Advice Book handles poultry raising in a practical way. And it shows what Johnson has done to high incubator prices. Ask for it. It's Free.

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POULTRY PAYS

when the hens lay. Keep them laying. For hatching and brooding use the best reasonable price. Incubators and Brooders—built upon honor, sold upon guarantee.

THE ORMAS

BANTA MFG. CO., Ligonier, Indiana.

Build Your Own Incubator.

PLANS FREE for building the famous Economy. All fixtures furnished; also incubators at almost one-half price. Catalogue free. ECONOMY CO., Harrisonburg, Va.

Mammoth Bronze Turkeys

for sale by the leading turkey raiser in the South. The birds are perfect specimens of this strain. Orders placed now gets choicest birds. Demand every year exceeds supply. So order at once. Rates and terms on request. PIEDMONT POULTRY PLACE, Miss E. CALLIE GILES, Propr., Whittle's Depot, Va.

PURE BRONZE TURKEYS,

Mammoth in size, correct in plumage. High class fowls at farmers' prices. Low express. W. G. HUNDLEY, Dog and Chicken Fancier, Worlds, Va.

Sherwood Chickens, M. B. Turkeys, English Pointers and Setters.

MAMMOTH BRONZE TURKEYS,

Greatest Winning Strain.

BARRED PLYMOUTH ROCK COCKERELS

of Hawkins, Miles, Jarman and Bradley Bros. strains. LESLIE D. KLINE, Vaucluse, Va.

I have for sale a few very handsome

M. Bronze Turkeys

AND

Golden Pencilled Hamburg Chickens. Dr. T. J. WOOLDRIDGE, French Hay, Va.

A FINE LOT OF

MAMMOTH BRONZE TURKEYS

for sale. Apply to R. E. CREE, Crozet, Va.

\$24.00 WEEKLY

For man with rig to introduce Royal Stock and Poultry Remedies; we mean business and furnish best of references. ROYAL CO-OP. MFG. CO., Dept. S. 2, Indianapolis, Ind.

A NEW VETERINARY BOOK.
One of the most complete, concise and convenient veterinary books we have ever seen, has just been published by Fleming Bros., who have long advertised in this paper. It is a unique production, and is especially intended as a farmer's book of reference on veterinary matters. It describes and advises treatment for nearly every ailment of horses and cattle, gives formulas and illustrates different diseases and blemishes, yet is so compact as to fit the vest pocket. A glance at the index suggests the value of this book to any stock owner, there being 125 different subjects discussed. The book contains 96 pages, is printed on a special grade of thin cotton fiber paper, durably bound in three-ply leatherette, cover printed in gold. No person interested in caring for or treating stock should neglect to write for this book, as it is something out of the ordinary both in contents and mechanical makeup. Simply address Fleming Bros., 280 Union Stock Yards, Chicago, asking for a free copy of "Fleming's Vest Pocket Veterinary Adviser," and stating that you are a reader of this paper.

A FAIR OFFER.
Swine raisers will be specially interested in the advertisement of Dr. Jos. Haas, V. S., manufacturer of live stock remedies, Indianapolis, Ind. The merits of Dr. Haas' preparations, especially his Hog Remedy, are well and favorably known to the leading stockmen of the country. His Hog Remedy has stood the severest tests for nearly thirty years, and has a larger sale than any other preparation on the market for hogs. As a special inducement to those who have never tried his Remedy the Doctor is making a special 30 day trial offer, wherein he agrees to refund cost of Remedy if consumer is dissatisfied after a fair trial for thirty days. We will further say that the Doctor is financially responsible, and will make good any of his agreements. We hope that many of our readers will avail themselves of his very liberal offer. See his advertisement elsewhere in this issue and mention this paper when writing to him.

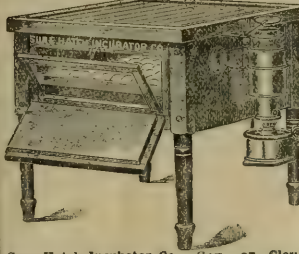
THE WORLD'S FAIR SOLD.
The entire Louisiana Purchase Exposition, which cost \$50,000,000, has been bought by our well known advertisers, the Chicago House Wrecking Co., which has bought every exposition in recent years. This firm has already entered upon the gigantic task of dismantling the property, and it is estimated that it will require fully 10,000 car loads to move the material. One thousand men are already at work. It is needless to say that our subscribers will have an opportunity to purchase an endless variety of bargains in the shape of lumber, plumbing appliances and everything else imaginable. Look up this firm's ad elsewhere in this issue.

SURE HATCH INCUBATORS

Hatch Chickens Every Time; Hatch Live Chickens; Hatch Every Fertile Egg

Cost little to run. 30 cents in oil brings off a hatch. Easy to operate—a child can do it. Make big money on small investment. Last a lifetime. Built of California redwood. Three walls, asbestos lined; solid as a rock, yet very light. California redwood never swells or shrinks, warps or cracks.

Asbestos is the proper lining for incubators—reflects heat from top of machine onto the eggs. Mother Nature way. Have 12-ounce cold-rolled copper pipe heating system; makes steady, even heat all around sides and over top. Copper water heater has 18 square ins. heating surface; largest heating surface ever put on an incubator, insuring perfect temperature at minimum cost. Regulator on inside of machine, already adjusted. Cannot be knocked out of position or broken. Everything about the Sure Hatch guaranteed by \$100,000 for Five Years. The Sure Hatch is



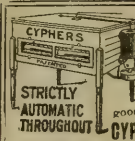
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which gives you an opportunity of taking off two hatches, and thoroughly trying machine. Over 50,000 in use and giving satisfaction. 100-egg actual size 120, with all improvements worth having on an incubator, shipped to your station, freight prepaid east of the \$10.00

Most liberal offer ever made by any concern. Send \$10.00, and we will ship machine at once. You have privilege of trying same for 60 days. If not satisfactorily money will be refunded. Shipments can be made immediately. If you live east of the Mississippi river, address Indianapolis, Ind. If west, Clay Center, Neb.

Free Catalogue now ready. Address

Sure Hatch Incubator Co., Box 87, Clay Center, Neb.; Box 1087 Indianapolis, Ind.



Standard Cyphers Incubators

are guaranteed to hatch more and healthier chicks with less oil and less attention in your hands than any other, or your money back. Absolutely automatic and self-regulating. Used and endorsed by 42 Government Experiment Stations and by America's foremost poultrymen. Complete Catalogue and Poultry Guide, 312 pages (8x11), with 500 illustrations. FREE, if you send addresses of two neighbors who keep good poultry and mention this paper. Address nearest office.

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Sold direct to purchasers at lowest prices. NO AGENTS. Latest double-wall 250 Egg Nursery Incubator and Brooder. Everything complete, with Directions and Plans, for \$28.00 cash. Satisfaction guaranteed. Reference, Delaware City National Bank. Set of Poultry House and Brooder Plans, 10c. Large 120-page Poultry book, 50c. Prompt shipment of anything ordered.

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FOR SALE Ten registered Jersey heifer calves, from 3 to 5 months old, \$25.00 per head.

Jersey and Guernsey bulls, 6 months old, \$30.00 each. Two yearling Biltmore bred Berkshire boars \$30.00 each. Also young sows bred and pigs, Bronze Turkeys, Barred Plymouth Rock and Single Comb Brown Leghorn fowls and Pekin Ducks.

M. B. ROWE & CO.,

FREDERICKSBURG, VA.

Oakshade M. B. Turkeys

FOR SALE.

Raised on 400 acre blue grass farm. Wolf blood. Eggs from W. and Buff Wyandottes, S. C. B. Orpingtons and Mottled Anconas. Address HUGENOT POULTRY YARDS, R. F. D. No. 2, Dublin, Va.

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Pure-bred, for sale. Toms \$3.00; Hens \$2.50. Miss MARCIE SIZER, Chilesburg, Va.

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Sold everywhere. Free trial sample for 2-cent stamp to pay postage.

Write for booklet "How to Shave."

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White Wyandottes.

EDGEWOOD STOCK FARM.

This breed EXCLUSIVELY. We can offer you in the Edgewood strain something profitable. Better try us. Pullets and cockerels for sale. If you want PULLETS, better get orders in quick. H. B. ARBUCKLE, Maxwellton, W. Va.

Pure-Bred

BARRED PLYMOUTH ROCKS and BLACK LANGSHANS in numbers to suit. Also ORPINGTON COCKERELS. Eggs in season. Address G. W. HARDY, Oakley, Va. Shipping point, Jeffers, So. Ry.

White Plymouth Rocks.

A lot of really good cockerels and pullets for sale cheap. These are from the best stock in the country, and are thoroughbred. Sold out Brown Leghorns. R. W. HAW, Jr., Centalla, Va.



BARRED PLYMOUTH ROCKS, PARTRIDGE COCHINS, B. B. RED GAMES, WHITE WYANDOTTES, S. C. WHITE and BROWN LEGHORNS, S. C. RHODE ISLAND REDS, choice stock, for sale. Eggs in season.

RIVERSIDE POULTRY FARM, J. B. Coffman & Sons, R. F. D. 19, Dayton, Va.

FINE STOCK FOR SALE.

A few very fine M. B. TURKEYS, lot of BARRED PLYMOUTH ROCK chickens—no finer in State. One pair TOULOUSE GEESE. One large, pure Holstein Cow, fresh with 2d calf. One pure bred Holstein Friesian bull calf. Berkshire pigs in March. Prices very reasonable. MRS. W. F. JACKSON, Olga, Va.

This May Interest You.

My BARRED ROCKS are stock-improving, blue-barred-to-skin kind. Closely related to New York Prize Winners. Eggs in season. L. W. WASLH, Box 124, Lynchburg, Va.

JOHNSON AND HIS OLD TRUSTY.

We are confident that our readers all heartily join us in welcoming Incubator Johnson back to our advertising columns for another year. It did not take Johnson long to make his Old Trusty Incubator famous. Our readers will remember that Old Trusty was his new machine that he brought out last year. But Johnson was already well known to poultry raisers in all parts of the country. To many of them personally, to others by his many common sense, helpful articles contributed from time to time to the poultry press. His Old Trusty at this time is almost as well known. This can be attributed to two causes. First, Johnson's typical Western push, which makes a success of anything he undertakes. And secondly, the machine itself, Johnson's greatest, the result of his many years' experience with poultry and incubator making. The people have been familiarly calling Johnson "the incubator man" for many years. This while he was engaged in building the 50,000 incubators he sold before he perfected his Old Trusty. He is connected with no other incubator or incubator concern now, and no one else has any connection with the Old Trusty or its manufacture. We advise our readers to get Johnson's catalogue written by his own hands, in his own peculiar style, with all the enthusiasm of a man who has made a success of poultry raising—a rather remarkable book, and full of common sense. Of course, Johnson sends it free. You can write him about any of your poultry troubles and get a personal reply. Look up his advertisement and proceed to get acquainted on the introduction of the publisher.

ALMANAC FREE.

The Studebaker Almanac for 1905 is, as usual, full of valuable information of especial interest to farmers. In addition to statistical and other information, it contains a large number of practical recipes, and has reviewed some of the best sayings of old Josh Billings—the most genial and philosophical of all American humorists. A free copy can be obtained from any Studebaker agent. If he cannot supply you, send a 2 cent stamp to the Studebakers, South Bend, Ind., and mention this paper.

Editor Southern Planter:

Enclosed you will find check on First National Bank of Harrisonburg, Va., to pay for ad. You are doing me a great deal of good. I am selling a number of cattle, hogs and sheep to parties who see or read the advertisement, and my stock is giving entire satisfaction. I expect to be with you in your next issue. Yours truly,

JOHN S. FUNK.

December 23, 1904, Harrisonburg, Va. R. F. D. 7.

Mention THE SOUTHERN PLANTER in writing.

LEGHORN POULTRY FARM



Has for sale 100 S. C. Brown Leghorn Hens about 1 year old. They are beauties. Price \$1 each or 6 for \$5. Will guarantee them to be as good as can be produced. I also offer about 25 S. C. White Leghorn Hens at same price. A. T. MATTHEWS, Box 35, Parkley, Va.

FINE FOWLS

BARRED, BUFF and WHITE PLYMOUTH ROCKS; SILVER, WHITE, BUFF and PARTRIDGE WYANDOTTES; BLACK MINORCAS; BLACK LANGSHANS; LIGHT BRAHMAS; BUFF and PARTRIDGE COCHINS; WHITE and BROWN LEGHORNS.

We are headquarters for stock and eggs of the above breeds, and will give satisfaction every time. OAKLAND POULTRY FARM, C. J. WARINER, Manager, Ruffin, N. C.

SILVER-LACED

WYANDOTTES.



Strong, healthy, farm-raised birds, Orr's strain, fine plumage—Cockerels, \$1.25; females, \$1. Order early so as to get first choice. Satisfaction to every customer or money refunded. POLAND CHINA FIGS \$5 each.

Or. H. H. LEE, R. F. D. No. 2, Lexington, Va.

COCKERELS.

of the following breeds for sale at \$1 each: Barred and White Plymouth Rocks, Black Minorcas, Black Langshans, R. C. Brown Leghorns, S. C. White and Brown Leghorns, Light Brahmans and Wyandottes; also Toulouse Geese and Pekin Ducks. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

COCKERELS.

A few choice B. P. Rock, White Wyandotte and S. C. B. Leghorn, also Leghorn Hens. Some large handsome M. B. Toms. All of fine pure bred stock. Write

MISS CLARA L. SMITH, Croxton, Caroline Co., Va.

PIEDMONT HEIGHTS FARM

YANCEY HILLS, VA.

Breeders of S. C. WHITE and BROWN LEGHORNS, WHITE WYANDOTTES, BARRED PLYMOUTH ROCKS. A few more S. C. B. Leghorn Cockerels for sale, and choice birds. Send in your orders for eggs for hatching. F. C. LOUHOFF, Prop.

HOLLYBROOK FARM.**Barred Plymouth Rock Cockerels.**

We have a fine lot of young cockerels for sale: healthy, vigorous birds. Careful attention has been paid to cross-breeding and selection of our Barred Plymouth Rocks, and we do not believe there is better laying, more vigorous and healthy stock anywhere in the country. Our cockerels are just the kind of stock poultrymen like to get to infuse new blood into their flocks. Price of cockerels, \$1.50 and \$2 each; the latter price for extra select cockerels. Price includes crates and delivery to Express Co.

EGGS FOR SETTING, \$1 per setting of 13 eggs.

We have also a few first class WHITE and SILVER LACED WYANDOTTE COCKERELS; price, \$2 each.

PRICE OF EGGS FOR SETTING: WHITE and SILVER LACED WYANDOTTE, \$1.50 per setting of 15 eggs.

HOLLYBROOK FARM,

P. O. Box 330.

Richmond, Va.



Valley Farm.
S. C. B. Leghorns.
(FORSYTH STRAIN)
BARREROCKS.

Stock and Eggs which will please you for sale. Write me your wants. CHAS. C. WINE, Mt. Sidney, Va.

White Leghorn

Cockerels for sale. Exhibition or breeding stock. Address

C. G. M. FINK,

R. F. D. 2, Richmond, Va.

TEN TRIOS**Buff Leghorns,**

the best layers, beautifully marked, from strains which layed 210 eggs a year. \$5 a trio.

SUPERB BRONZE TURKEYS from the best pens of the country. Trio, \$10; hens, \$3 each. Toms, \$4 to \$5 each. Satisfaction guaranteed. A. R. VENABLE, JR., Farmville, Va.

PIT GAMES

Black Devils and Red Cubans.

Where they won, Sharon, N. Y., 4 out of 5 Blue Rock, Pa., 2 out of 3, Clarion, Pa., 1 straight. Roanoke, Va., 8 out of 9. Akron la., 2 straight. Eggs, \$2 per sitting. Young trials, quail size, \$2.

THOS. W. JARMAN, Yancey Mills, Va.

BUFF ORPINGTONS FREE.

To the person hatching largest per cent. of our eggs we will give free a fine pair Orpingtons. Eggs at 10c. each, or in lots of 50, 8c. each. A limited number of cockerels at \$1.50 to \$3 each. No pullets. 25 POLAND CHINA pigs, sired by "Oconeechee," \$4 to \$6 each. Satisfaction always. OCONEECHEE FARM, Jefferson, Mecklenburg Co., Va.

In writing mention Southern Planter

MORE TRUTH THAN POETRY.

Sing a song of Sure Hatch

The Incubator Co.,

Imagine eighteen million chicks

Lined up in a row.

And just suppose with one accord

They'd all begin to crow—

Wouldn't that be a lousy ad.

For the Sure Hatch Co.?

Eighteen million chickens are hatched every year by Sure Hatch Incubators.

"Incredible!" you say, in astonishment. Well, let's see.

Over 60,000 incubators have been sold by the Sure Hatch Incubator Co. and are in regular use throughout the United States.

If each of these machines takes off only three hatches of 100 chickens each in the course of a year, just sharpen your pencil and see what it amounts to.

You will find that our statement is right—over 18,000,000 chickens a year.

If these chickens are sold at 50c. each, it would amount to \$9,000,000 each year.

Just think of one incubator company located in Nebraska, helping to add such an enormous amount of money to the country's wealth.

The old, original Sure Hatch Incubator Co. that manufacture the only Sure Hatch Incubator on the market, are selling more incubators and brooders this year than ever before, their annual sales being larger than any other incubator company in the world. Surely they may be pardoned for doing a little crowing on their own account.

They have a new catalogue which is very attractively gotten up this year, and which tells all about Sure Hatch Incubators and Brooders.

This catalogue is free, and you should drop them a postal and get it at once. Address them: Sure Hatch Incubator Co., either Box B, Clay Centre, Neb., or Box H, Indianapolis, Ind.

The Pope Bicycle Daily Memorandum Calendar for 1905 contains a memorandum leaf for every day in the year and 365 original sayings in favor of good roads, good health, outdoor exercise, and that great vehicle of health-giving, the modern bicycle, by our most eminent living men of marked accomplishment. The calendar is free at Pope Mfg. Co.'s stores or any of our readers can obtain it by sending five 2 cent stamps to Pope Mfg. Co., Hartford, Conn., or 143 Sigel street, Chicago, Ill.

"ARION" BOUGHT BY MR. SAVAGE.

Mr. M. W. Savage, proprietor of the International Stock Food, has added Arion to his magnificent stock of horses. This list now includes the world famous Dan Patch, 1:56; Directum, 2:5 1-4; Roy Wilkes, 2:6 1-2. It is doubtful if such a quartette of famous stallions has ever before existed on one farm.

EGGS FOR SITTING

from pure bred poultry—Barred Plymouth Rocks, Rose Comb Rhode Island Reds, Buff Orpingtons, White Wyandottes, S. C. White Leghorns. Fine lot of Cockerels and pullets for sale. RIVERSIDE POULTRY YARDS, G. H. SHOOK, Prop., R. F. D. 1, Eutola, N. C.

FIRST CLASS**EGGS and STOCK**

My prices will please all as will the quality. Some first prize birds in my flock. BUFF and WHITE ORPINGTONS, WHITE and BROWN LEGHORNS, GOLDEN, SILVER and WHITE WYANDOTTES, B. P. ROCKS, LIGHT BRAHMAS and S. S. HAMBURGERS. I sell a splendid Brooder at \$3.50.

O. E. SHOOK, R. F. D. 1, Waugh, N. C.

HEATWOLE'S**BOOK ON POULTRY**

Tells you how to treat diseases, feed and care for poultry with success. It illustrates OUGHBERD FOWLS, and quotes most reasonable prices on stock and eggs. Only 6c. List free. JOHN E. HEATWOLE, Harrisonburg, Va.

Rose Comb

WHITE LEGHORNS and WHITE WYANDOTTES for sale. Good stock. Eggs in season. \$1 for 15. J. W. NICHOLS, Grove, Va.

I still have a few very choice

BUFF ORPINGTON

and R. C. W. Leghorn, Cockerels for sale. Also can book orders for eggs.

T. M. KING, "Queenland Farm," R. F. D. No. 2, Hagan, Lee Co., Va.

Homer Pigeons,

Bred of choicest selected stock, from Plymouth Rock Squab Co., \$1 per pair.

C. D. BRUYN KOPS, Wake, Va.

Scotch Collies

Champion blood of England and America. Puppies now ready to ship. Also bitches in whelp for sale. MEYER & JEHNE, Farmville, Va.

COLLIE PUPS

Hy Imported Sires. Sable and white and tricolors. Prices, \$8 to \$15. Older ones correspondingly low. Book on Training, 50 cents: FREE if you buy a Collie.

MAPLETON STOCK FARM, Rutland, Vermont.

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FOR EVERYTHING;
NEW OR SECOND-HAND;
SOLD OR RENTED.
Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.

"Feeds and Feeding"

Prof. Henry's Great Book for
Farmers and Stockmen.

Delivered anywhere for \$2.00
With the SOUTHERN PLANTER, 2.25

Angora Goats

Have seven (7) FINE DOES, are young and in good condition, ready for sale. Three have kids by their sides, the other four heavy with kid. Ten in all. Will sell reasonable to quick buyer. Will sell part or whole lot.

Robert C. Brauer,
Live Stock Commission Merchant,
UNION STOCK YARDS.

Address Box 204. Richmond, Va.

Angora Goats...

"The Wealth of the Wilderness." A 32 page pamphlet, by Geo. Edward Allen. Price, 25c. It's worth it.

THE SOUTHERN PLANTER, Richmond, Va.

ANGORA GOATS,
CHESHIRE HOGS,
PONIES for Children.
Dr. Wm. C. JOHNSON, Frederick, Md.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Chft., Ky

For Sale or Exchange.

MALTESE JACK, five years, sound, kind and sure. One pure Red Poll bull calf. W. S. MOTT, Dixondale, Va.



JACKS,
JENNETS,
STALLIONS

Fine JACKS a specialty.

Write for what you want.
W. E. KNIGHT & CO., R. F. D. 5,
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KNIGHT & JETTON,
Breeders of and dealers in

JACKS,
JENNETS, STALLIONS,
Durham and Hereford
Yearlings.

FINE JACKS a specialty.
Send Stamp for catalog.
Murfreesboro, Tenn.



—A VERY FINE—

Virginia Bred Jack,

2 years old the 10th of last June; large for his age and a perfect beauty. Price \$30 cash, or will take \$100 down and note for balance, to be well secured and bearing 6 per cent. interest until paid. Don't go West and pay a fabulous price when you can get better stock at home for less money. Write or come and see me.

J. E. THOMASSON, Bumpass, Virginia.

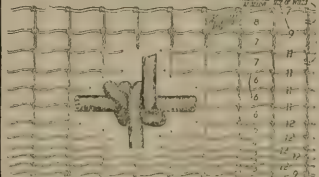
KENTUCKY JACK FARM



I have now the finest and best lot of big black, Spanish and Kentucky-bred Jacks that I ever had. In my 18 years' breeding experience, to offer to the trade. Write or come to see me. You will find my prices right. JOE E. WRIGHT, Junction City, Ky.

PAGE WIRE FENCE.

Just to show you what Page spring steel wire is, the Page Woven Wire Fence Co., Adrian, Mich., will send free to any of our readers who expect to buy fence at any time, a thoroughly practical paring knife made from this wire. They do this as a practical illustration of what Page wire is, and with it they send a new Page Fence catalogue describing all the styles for different farm, stock, poultry, lawn and park purposes, and the characteristics of Page Fence that make it superior to ordinary wire fencing.



It is expected that our readers will write for this free knife and catalogue, and upon arrival, it is requested that attention be given to the matter on pages 18, 19 and 20 of the book, which gives in concentrated form the real reasons why Page Fence is entitled to consideration; why it is more enduring, more resilient, better constructed and worthy of a better price than inferior fence that is made to sell.

To insure getting the knife, mention this publication when you write.

Dawson, Ohio, June 12, 1904.

R. F. D. No. 1.

Dr. B. J. Kendall Co.,

Enosburg Falls, Vt.:

Gentlemen,—Please send me your "Treatise on the Horse and his Diseases." I have been using your Kendall's Spavin Cure on my horses. I had a horse with a callous on her shoulder, which everybody said would have to be cut out. I commenced using your Spavin Cure on it, and in two weeks it was removed. I think it can not be beat for the ailments of horses.

Very truly yours,

J. C. SHORT.

A man can't sow thistles and pick sweet peas—that is, not the same year. No more can you use common soap for shaving and expect a smooth, soft, comfortable skin. Toilet soaps are meant to cleanse; Shaving Soaps ought to soothe and soften. If you want to see the difference for yourself at the cost of a mere stamp for postage, write The J. B. Williams Company, whose offer appears elsewhere in this paper. Remember, it may be unjust, but a good many people judge you by your face.

Clara—Sadie is going to marry that old Hardcash who has been refused by all the assurance companies.

Maud—That's the reason why she accepted him.

SALT POND HERD

Duroc Jerseys

PAUL J., 21625, heads the herd, with such sons as LULIE'S PET, 30434, BELLE OF SALT POND, 70454, and LADY OF VIRGINIA, 70458. Young stock for sale. S. A. WHITTAKER, Hopeside, Va.

A FEW CHOICE

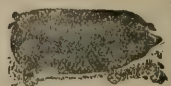
ESSEX PIGS

Some choice 1904 South-down and Hampshire Down ewe lambs, and ONE FINE REG. POLLED ANGUS BULL 3 yrs. old, in good condition, gentle, and all RIGHT in every way. L. G. JONES, Tobaccoville, N. C.



We wish you a MOST PROSPEROUS NEW YEAR, and may your **DUROCS** be the Biggest and Fastest in the land, your **JERSEYS** the best Butter makers, your **LEWELLYNS** and **BEAGLES** the finest Hunters, your **B. P. ROCKS** the most prolific Layers and your **B. TURKEYS** the Largest and Handsomest.

THE CEDARS KENNELS, P. & S. Farm,
Midlothian, Va.



Registered P. Chinas

to whites Large strain. All ages mated not akin, 8 week pigs, Bred sows, Service boars, Guernsey calves, Scotch Collie pups, and Poultry. Write for prices and free circular. P. F. HAMILTON, Cochranville, Chester Co., Pa.

Tamworth Swine

FOR SALE

1 YEARLING BOAR and 2 YEARLING SOWS, not akin.

Cheap to a quick buyer. BOX 331, Norfolk, Va.



O. I. C. PIGS

FROM REG. STOCK

FOR SALE. PRICES RIGHT

F. S. MICHE, Charlottesville, Va.

CROSS-BRED

POLAND-CHINA and **CHESTER WHITE PIGS.**

Imported Percheron Stallion, wt. 1,900 lbs, gentle and good worker, at a sacrifice.
S. M. WISECARVER, Rustburg, Va.

For Sale

A fine chestnut sorrel

Driving and Breeding Mare

10 years old, with two of her colts (one mare colt 17 months old, and one horse colt 6 months old), mare is safe in foal again to noted stallion; mare and colts are of very fine breeding. MEYER & JEHNE, Farmville, Va.



and Whiskey Habits cured at home without pain. Book of particulars sent FREE. B. M. Woolley, J. D., Atlanta, Ga., 113 N. Pryor St.

Mention THE SOUTHERN PLANTER in writing.

Always the Berkshire Event of the Year

Biltmore Farms,

Biltmore, N. C.

TAKE PLEASURE IN ANNOUNCING THEIR

FIFTH ANNUAL SALE

OF

60 Head Large English Berkshire Brood Sows,
FEBRUARY 14, 1905.

Auctioneer: Col. R. R. BAILEY,
GIBSON CITY, MO.

These Sows are of the very choicest individuality and breeding that it is possible to find.

Every one is young—just in her bloom—guaranteed safe to one of our great Boars: Loyal Lee II. of Biltmore, Loyal Lee of Francesca, King Hunter, Fricker's Hall Mark, Gem Duke of Biltmore, Danesfield Drogheda, Danesfield Loyal Master and Sterling of Biltmore.

They are either imported in dam, and developed here so as to secure full acclimation and extra size, or are a combination of the best American winners on imported sows.

The entire lot will be sold without reserve; and nothing but the fact that we have a grand lot of old Sows at work shelling out the best kind of Pigs by the dozen enables us to let such a lot go without weakening the Biltmore Herd.

You can get them at your own price, and we will get the advertisement and the fresh business that they are bound to bring us.

If you have not Berkshires you are out of date. Our sales for the last two months (November and December) are just double what they were at same period last year.

WRITE FOR A CATALOGUE.

BILTMORE FARMS,
BILTMORE, - - - NORTH, CAROLINA.

Berkshires

Still a few fine pigs for sale. Farrowed September, 1904; sired by MASON OF BILTMORE, II (68548), from registered Sows. None but Biltmore blood in my herd. For further particulars, write ROBERT HIBBERT, Charlottesville, Va.

MAPLE GROVE

BERKSHIRES.

Am offering pure bred pigs at reasonable prices. Either sex. Pedigree furnished with each pig.

J. W. McFADDIN,

R. F. D. No. 1, Raphine, Va.

Berkshire Pigs.

Eligible to registry \$5.00 each, \$10.00 pair. S. C. BROWN LEHORN and B. P. ROCK Cockerels \$1.50 to \$2.00. Eggs per setting \$1.00. Also a few BLACK MINORCA and M. B. TURKEYS. None but best handled.

W. A. WILLEROY, Sweet Hall, Va.

HAWKSLEY STOCK FARM

Has some very fine young

BERKSHIRE PIGS,

3 to 4 men old. Only "tops" sold. Also a few as fine M. B. TURKEY GOBLERS as can be found anywhere.

J. T. OLIVER, Prop., Allen's Level, Va.

OCK herd represents the very best strains imported

—LARGE—

English Berkshires.

Choice stock at reasonable prices. Address

○ Cottage Grove Farm,
P. O. Box 5, Greensboro, N. C.

GLENBURN ... FARM ... BERKSHIRES

We have two imported boars and eight imported sows, the cream of the greatest English heds; also animals combining the choicest English blood with that of American champions. Pigs from imported and from English-American animals for sale. DR. J. D. KIRK, Roanoke, Va.

WE NOW HAVE A CHOICE
NUMBER OF PURE-BRED

Berkshire Pigs

MINIBORVA FARM.

Box 901, Richmond, Va.

In writing mention Southern Planter

THE COMPANION INFORMS AND ENTERTAINS.

The Youth's Companion uses entertainment as a means rather than an end, conveying always in its fiction and its articles some convincing truth or some contribution to the useful knowledge of its readers.

The 225 men and women enlisted to write for The Companion represent an infinite variety of talents and callings. Through The Companion they address not only the young and impressive, but the fathers and mothers of the nation. The entire family claim a share in the good things which fill The Companion's pages.

Full Illustrated Announcement, describing the principal features of The Companion's new volume for 1905, will be sent to any address free.

The new subscriber for 1905 will receive all the issues of The Companion for the remaining weeks of 1904 free from the time of subscription, also The Companion "Carnations" Calendar for 1905, lithographed in twelve colors and gold.

THE YOUTH'S COMPANION.
144 Berkeley Street. Boston, Mass.

OF VALUE TO HORSEMEN.

Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

CATALOGUES.

Prairie State Incubator Co., Homer City, Pa. This company sends us a beautifully gotten up catalogue of their specialties in Incubators, Broilers, Heaters, etc. Send for this before buying.

Sure-Hatch Incubator Co., Clay Centre, Neb. Circular of information as to incubators and brooders.

Smith-Davis Co., Wilmington, N. C. Agents for and dealers in Peruvian Guano and chemicals for fertilizing. Pamphlet, "A trip to the Peruvian Guano Islands."

Mrs. Ascum—Have you still got that servant girl you had last week?"

Mrs. Hyram Offen—Which day last week?"

REGISTERED

POLAND-CHINA PIGS

SILVER LACED WYANDOTTES, BUFF and BARRED P. ROCK CHICKENS. Nothing but the best shipped. Write for prices, stating wants. Eggs \$1.00 per setting. E. T. ROBINSON, Lexington, Va.

ORCHARD HILL PURE-BRED

POLAND CHINAS

Two fine litters of pigs now ready for sale; six beautiful young sows ready to breed, and a fine Guernsey bull calf, one month old. F. M. SMITH, JR., R. F. D., No. 4, Charlottesville, Va.

∴ SOME VERY FINE ∴

RED POLLED

Calves, entitled to registry, for sale; also a few very good

Poland China Pigs

whose breeding cannot be excelled. Only one SHETLAND PONY for sale now.

ARROWHEAD STOCK FARM, SAM'L B. WOODS, Propr., Charlottesville, Va.

EDGEWOOD STOCK FARM.

Red Poll Bull Calf.

Majlolini is greatest bull of breed. This calf carries his blood. His dam also traces back to Rufus. Can't you trust this blood? Calf now ready. You men in Virginia order quick if you want to get a promising youngster. H. B. ARBUCKLE, Maxwelton, W. Va.

Now is the Time

To Invest in

Pure-Bred STOCK.

The man who is going to buy a PERCHERON STALLION should do so before they are "cullled" over and by doing so will get a horse acclimated and used to his new quarters, etc., they can always be bought cheaper from a breeder at this season of the year. I can fill the bill if you want a good SHORT-HORN BULL or cows and BERKSHIRE Hogs, or PERCHERONS.

JOHN F. LEWIS,
Lynnwood Stock Farm, Lynnwood, Va.

POULTRY DEPARTMENT,

BILTMORE FARMS.

BILTMORE, NORTH CAROLINA.

THE HOME OF THE UTILITY BREEDS.

Plymouth Rocks, **BARRED** and **WHITE**  Wyandottes, **WHITE AND GOLDEN**

.... R. C. and S. C.

LEGHORNS,

BROWN AND WHITE.

TURKEYS,

BRONZE AND WHITE.

PEKIN DUCKS.

Our birds of these popular utility varieties won twenty-eight regular and special premiums at the World's Fair, St. Louis, Mo., MORE THAN DOUBLE THE NUMBER OF ANY OTHER EXHIBITOR FROM THE SOUTHERN STATES.

Our great prize record of 2,028 prizes, won at such shows as the World's Fair, Charleston Exposition, Atlanta, Washington, Hagerstown, was made principally with birds of our own breeding. As we breed and exhibit only the popular utility varieties, we meet with the hottest competition in all these shows.

Our birds have been bred in line for eight years, and can be depended upon to transmit their good qualities to their offspring.

We have a large lot of choice Cockerels and females on hand for sale at reasonable prizes.

Eggs for hatching from our best prize matings are worth \$3.00 to \$5.00 per setting.

Send for Poultry Circular, giving a description of our matings for the coming season.

BILTMORE FARMS, Biltmore, N. C.

NOTE: We must sell at least one thousand birds raised from our 1904 prize mating to clear our home runs for the 1905 matings, that we have just made. They are going quick; but please make them go quicker yet by sending us an immediate order. We are certainly giving a little better value than ever before for every remittance, and will gladly place our birds in competition with anything you can buy at the same price elsewhere, **QUALITY CONSIDERED.** **BILTMORE FARMS, Biltmore, N. C.**

The Imperial Fruit and Poultry Farm**OFFERS, AT PRICES IN REACH OF ALL,****STRICTLY PURE-BRED****Barred and White Plymouth Rocks,****White and Silver-Laced Wyandottes,****S. C. Brown and White Leghorns.****FEW B. MINORCA COCKERELS AND PEKIN DUCKS.****SATISFACTION GUARANTEED.****WRITE TO-DAY FOR INFORMATION.****P. H. HEYDENREICH, Prop., : : : Staunton, Va.**

Short Horn Bull.

3 years old, for sale. Weight, 1,200 pounds. Healthy and vigorous. L. L. WALLACE, Amelia, Va.

REGISTERED SHORT HORN BULL,

"PLAIN DEALING," for sale to avoid in-breeding. Bred by Cottrell Bros., Hoosick Falls, N. Y., and is of well established milking strain. Solid deep red and of fine form and finish. Weight, 1550 pounds. Price, \$75. JOS. WILMER, Rapidan, Va.

Springwood Short-Horns

Young stock for sale, sired by Royal Chief No. 185432; he by Imported Royal Stamp Champion Bull at Ohio State Fair this year Spring and fall Poland China Pigs and shoats: sired by Cole's Perfection. I will sell this hog at a bargain. Call on or write WM. T. THRASHER, Springwood, Va.



I will sell a few Shorthorn Bull

calves at prices which will astonish you. All pedigreed and extra fine. Let me quote you. I. S. EBERLY, Glendale, Va.

REGISTERED

SHORTHORNS.

Having concluded to close out my herd, I offer for sale, 6 LARGE COWS and CALVES from Imp. Josephine Marquis of Butte, 116453; also a nice lot of heifers. CHAS. VEIRS, Rockville, Md.

ELLERSLIE FARM

Thoroughbred Horses

AND SHORTHORN CATTLE, Pure Southdown Sheep and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,
CHARLOTTEVILLE, VA.

REGISTERED CATTLE.

Short Horns. Polled Durhams. Red Polls.

Who wants a few good Bulls, Heifers or Cows? Choice herd, bred and reared in the mountains of Western Texas, below the fever line. Healthy, hardy stock. Write us your wants. Or will sell entire Herd of three hundred head, and rent fine ranch reasonably. Splendid Opportunity.

LANDA CATTLE COMPANY,
New Braunfels, Texas.
Breeders of Registered Cattle Only.

FOR SALE.

One pair of
GOOD WORKING MARES,
safe in foal to Jack. Cheap. MEYER & JENNE, Farmville, Va.

THE PRACTICAL FARMER.

Raleigh, N. C.

It may be of interest to you to know that I am editing The Practical Farmer, a weekly farm paper of wide national circulation, and on which I have been working for a number of years past. While we are endeavoring to make The Practical Farmer of value to every farmer in every State in the Union, and have the best talent among the practical farmers of the whole country as contributors, I have always endeavored to make it of value to the growing agricultural interests of the South. I want to get on our subscription list every progressive and reading farmer in the South as well as in other parts of the country. The Practical Farmer is not made up, as many papers are, of clippings, good, bad and indifferent, from other papers, but is filled with original matter from men on the farms, and it aims to be the great educational force in the agricultural development of the whole country.

If you are not already a reader and subscriber to The Practical Farmer, it will pay you to look into it, and not only read it yourself, but to work for the extension of its circulation, since the larger the subscription list the better and better we will be able to make the paper.

Specimen copies and terms to agents can be had by addressing a postal to The Farmer Company, publishers of The Practical Farmer, Market and Eighteenth streets, Philadelphia, Pa. I believe that I have the confidence of the farmers to such an extent that they will trust me to make the paper all that they would wish it to be, and I will be glad at all times to receive hints as to its betterment. Subscription, \$1 per year. Very truly yours,

W. F. MASSEY.

We will furnish The Practical Farmer and Southern Planter one year each for \$1.20 to those who refer to this notice.—S. P.)

FOR THE POOR.

In some churches in the West a feature of the service is the collection taken by the young women of the congregation. Upon one occasion a notorious skinflint occupied a prominent pew. When one of the young women handed the plate to him he gruffly said: "No, I haven't anything."

Came the swift reply: "Then take something. You know this collection is for the poor."

THE WARRINER STANCHION.

Mr. Wallace B. Crumb, Forestville, Conn., sends us a very interesting little pamphlet, descriptive of his Patent Chain Hanging Cattle Stanchion. An advertisement of this stanchion will be found regularly in our columns, and we invite the attention of our readers to it. Be sure and send for the pamphlet.

In writing mention Southern Planter

Elkton Stock Farm,

LOCATED ON NORFOLK & WESTERN R. R.
12 Miles W. of Lynchburg.
Breeders of Pure Bred, Registered

HEREFORD CATTLE

AND BERKSHIRE HOGS

Young stock for sale at all times, at reasonable prices.

All statements and representations guaranteed.

LONG DISTANCE TELEPHONE.

FREST DEPOT, VIRGINIA.

COTTAGE VALLEY STOCK FARM.

FINE STOCK FOR SALE LOW.

7-8 and 15-16 GRADE ANGUS BULLS and HEIFERS from 6 months to 2 years old. One Bull Calf, half Angus and half Short-Horn. One pair splendid 1,200-pound Bay Mares 6 years old, first-class all-round farm teams, and very good roadsters. One pair blocky, well-built Mules, 15-1-2 hands, 5 years old, well broken; price \$300. Write enclosing stamp. Pure-bred POLAND-CHINA PIGS at \$5 each. Pure-bred LLEWELLYN SETTER PUPS, \$5 each.

W. M. WATKINS & SONS, Saxe, Va.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS AND HEIFERS.



None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$25. Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battisboro, N. C.

Best Bred Jersey Bull

IN VIRGINIA

FOR SALE AT BARGAIN.

Also a few Registered and Grade Jersey Cows and Heifer Calves, rich in Stoke Pools and St. Lambert blood. Several Registered Duroc Jersey Sows in farrow. Come see 'em. THE CEDAR P. & S. FARM, Middleblan, Va.

EVERGREEN DAIRY and STOCK FARM OFFERS FOR SALE

Registered Jersey Bull,

Two and one-half years old son of RIOTOS TRIA DONNA, who tested 174 pounds of butter in 7 days. Berkshire pigs at farmers' prices. W. B. GATES, Rice Depot, Va.

DORSETS AND HEREFORDS

J. ARMSTRONG G. Lantz Mills, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

REGISTERED

Hereford Cattle.

I call the attention of cattle men to my present offering of **BULL CALVES, YEARLING BULLS, MATURE BULLS; COWS WITH CALF AT FOOT.**

Of all breeds, **HEREFORDS** are the best adapted to the South. They are the best growers and cheapest feeders. They put on the most flesh for the amount of feed consumed. They are "rustlers" and "hustlers," the kind every man who raises cattle for market, wants and needs. Address

MURRAY BOOCOCK,
Keswick, = = = = = = Virginia.

THE PEST OF SPARROWS.

The government has again been giving some attention to the English sparrow, and, while at this writing no definite statistics are obtainable, it is roughly estimated that there are upwards of a hundred millions of the little feathered creatures in this country. The sparrows have long ago been voted a pest, but it was not until recently that strenuous efforts have been made toward their extermination.

"Equip the boys with the Stevens rifle," says a well-known Washington official, "and the sparrow question won't be a matter of doubt very long."

This thought is right in line with the ideas that the J. Stevens Arms and Tool Co., of Chicopee Falls, Mass., the well-known firearm makers, have been advocating for some time. The Stevens people have been urging the use of the small calibre rifle on farms where not only the sparrow, but woodchucks, squirrels, crows, hawks, are also sources of nuisance.

As a general proposition, it does seem reasonable to believe that a man or boy, armed with a "Stevens" and instructed in its use, could soon rid the neighborhood of the living crop destroyers at a small outlay and have a lot of fun himself while doing the work.

Editor Southern Planter:

Dear Sir,—I beg to report the following sales of Berkshires during this month:

Imported Danesfield Fury, 76750.
Imported Bright's Poet, 80834.
Imported Governor Hightide, 80836.
Imported Hightide Pocahontas, 80837.
Lady Lee Guilford, 80838.
Glenburn Dora, 78877.
Danesfield White Tail, 80835.
Faithful Jeweler, 78876.
Sow pig not named.

As you will notice four of the above are imported animals. Faithful Jeweler and Danesfield White Tail are from imported animals on both sides. I sold several of the above to a gentleman who visited my farm, after having visited the Berkshire exhibit at St. Louis. The above animals all went to West Virginia and Alabama. My sales this year have been very satisfactory.

Yours truly,

Dr. J. D. KIRK.

Roahe, Va., December, 1904.

THE NOROTON BEAUTY POTATO.

Messrs. J. M. Thorburn & Co., of New York city, are offering the Noroton Beauty Irish Potato this season for the first time. We invite attention to the ad. Many of our readers are doubtless aware of the fact that this firm has propagated and developed more new varieties of seed potatoes than all other seedmen combined. This firm's reputation is back of this new potato as a guarantee that it is everything claimed for it. Look up the ad and send for the Thorburn catalogue which, by the way, is the 104th successive annual one issued by this company.

KENDALL'S SPAVIN CURE

Known Everywhere

Is accepted by all experienced horsemen, breeders and trainers as the only reliable remedy for Spavins, Ringbones, Curbs, Splints and all forms of lameness. It cures permanently and without scar.

Burgin, Ky., February 1, 1904.

DR. B. J. KENDALL CO., Enosburg Falls, Vt.

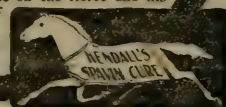
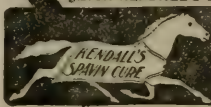
Gentlemen—I have your advertisement stating that you would give away a book, "A Treatise on the Horse and his Diseases." I would like to have your book very much, as I handle and keep a good number of horses all the time. I have used your KENDALL'S SPAVIN CURE and have had great success with it, having removed some bad Spavins of long standing that the veterinary pronounced incurable. Trusting I may receive your book soon. I am,

Respectfully yours,

W. G. SMOCK.

Price \$1; 6 for \$5. As a liniment for family use it has no equal. Ask your druggist for KENDALL'S SPAVIN CURE, also "A Treatise on the Horse and his Diseases." The book free, or address

Dr. B. J. Kendall Co.
Enosburg Falls, Vt.



SUNNY HOME HERD.

Aberden Angus Cattle

More than fifty females sired by some of the most famous bulls of the breed. Headed by the great Baron Roseboy, No. 57666, son of the world famous Gay Blackbird. Advocates of rival breeds will tell you what this breed is doing, but for sixteen years the Angus have been so far ahead that the breed has been in a class by itself at all the leading markets. Their record at the late International Show is simply what we have been led to expect from the breed. Grand champion steer, Grand Champion car load, highest priced single steer, highest and second highest priced car load, and the usual number of dressed carcass prizes. Remember, we are breeders of years' standing, not "kids" in the business. Write A. L. FRENCH, R. F. D., 2, Byrdsville, Va. Station Fitzgerald, N. C., on D. & W.'R'y.

Rose Dale Herd Aberdeen Angus.

Top notch young registered Bulls our specialty. A few heifers to offer with bull not akin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS, Jeffersonsonton, Va.

MONTEBELLO HERD ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va.

THOROUGH-BRED...

Berkshire Boars, Dorset Buck Lambs, Jersey Bull Calves.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

For Sale or Trade

One brown dappled

Registered Percheron Stallion

10 years old. Weight, 1,900 pounds; gentle and sure foal getter. Also one 4 year old dark dappled gray registered Percheron stallion. Weight, 1,600 pounds. Both very active and fine stallions. Will trade for land or horses. MEYER & JENNE, Farmville, Va.

DAVON HERD, HAMPSHIRE DOWN FLOCK, ESTABLISHED 1884. ESTABLISHED 1880.

DEVON CATTLE BULLS and HEIFERS.

Hampshire Down Sheep, RAMS and EWES.

ROBERT J. FARRER, Orange, Va.

Woodland Dorsets.

At 6 years' State Fairs this year, we won every first, but two. At St. Louis, we won second on Ewe Lamb and third on Ram Lamb, against the strongest Dorset Show ever seen in America.

J. E. WING & Bros., Mechanicsburg, O.

When corresponding with our advertisers always mention the Southern Planter.

— MORVEN PARK —

GUERNSEYS

The Property of WESTMORELAND DAVIS, Esq.

LARGE HERD OF FASHIONABLY BRED REGISTERED ANIMALS, INCLUDING COWS IN THE ADVANCED REGISTRY. HERD HEADED BY THE BRILLIANTLY BRED IMPORTED BULL,

TOP NOTCH No. 9023.

The Dam of this Bull, Imported ITCHEN BEDA, took 1st prize at the "Park Royal" Show in England in 1902, and her daughter ITCHEN BEDA II, took the same honors in 1904: further, Imported TOP NOTCH'S Dam, ITCHEN BEDA, entered the official advanced Registry of the American Guernsey Cattle Club this year with a record FOR THE YEAR of 10642.10 lbs. of milk; 548.70 lbs. of butter fat, equivalent to 640.15 lbs. of butter.

The Pedigree of Imported TOP NOTCH, with some of the achievements and prizes won in the direct line of his ancestry, are given below:

TOP NOTCH, 9023, bred by Sir Henry Tichborne, of England, was sired by Rival, 1343 E, and is out of imp. Itchen Beda, 15627. His father, Rival, by Rival of Mont March, 1164, P. S., out of Clatford Gentle, 4746, E. (1st prize English Royal, B. & W. E. and Royal C., 1900). His mother, Itchen Beda, 15627 (see record above); she by Loyal of Hungate, 978, P. S. (1st prize, 1896, second prize, 1898); sire of Itchen Lady, Hayes Lily du Preel. His extended pedigree is impossible in this space, but will be furnished if desired. It goes back to winners of the Queen's prizes, as well as to members of her late Majesty's Prize Herd.

MORVEN PARK is situated in Loudoun County, Virginia, and because of its climate and soil is peculiarly adapted to the production of the highest class of animal life, and particularly to supply the needs of Southern breeders of pedigreed cattle.

REGISTERED and TUBERCULIN TESTED animals for sale, including a fine lot of BULL CALVES at reasonable prices.

For further particulars, Address

**LIVE STOCK DEPARTMENT, MORVEN PARK,
LEESBURG, LOUDOUN CO., VA.**

COMPETITION IN FARM PRODUCTS.

Agriculture is our leading industry and the basis of all our commercial, financial and industrial prosperity. Consequently, not farmers alone, but all classes of people are concerned in the development of our farming interests, and the Sentry feels justified in the occasional discussion of its important features.

That the United States is soon to find a formidable competitor for its long unchallenged supremacy is becoming manifest to the thoughtful and discerning. Some recently published figures, for example, show how rapidly Canada is advancing in the production of grain.

In 1900 the wheat crop of Western Canada was not over 20,000,000 bushels, but in 1903 it was about 80,000,000 bushels. A vast area, estimated at 43,000,000 acres, is suitable for wheat. On this area, at Manitoba's rate of production, the crop should be over 800,000,000 bushels, or much more than the United States produces.

The yield is high in Canada, often reaching 25 bushels to the acre. In 1903 the average was for the United States 12.9 bushels per acre, for Minnesota, 13.1 bushels; for Northwest Canada, 19 bushels, and for Manitoba, 16.4 bushels. Besides wheat, other grains are largely produced, as, for example, 50,000,000 bushels of oats and 10,000,000 of barley. Development is rapid, since the farmers in the United States are selling their high-priced land to invest in the cheaper virgin soil of the Northwest.

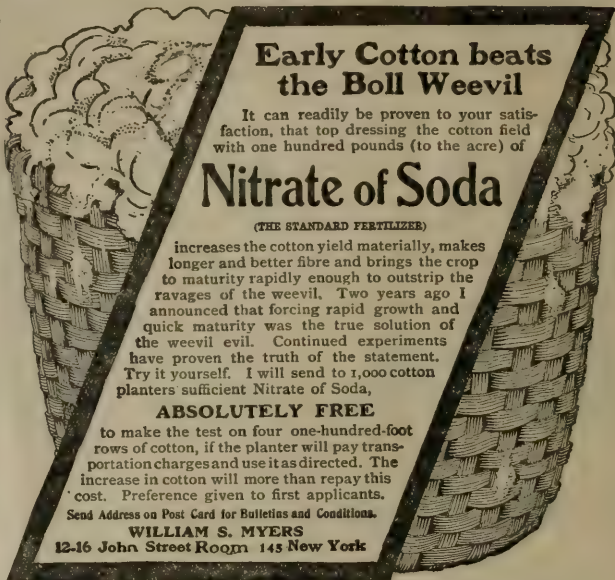
"We may therefore expect," is the assertion made in a paper read at the National Grain Dealers' Association at Milwaukee, "within a comparatively few years to see the United States give place to Canada as the chief wheat-producing country of the world."

It will take time; it will require a lot of railway building and a great influx of population and broad general development to bring this about.

But evidently it is coming. Emigrants, of whom about one-half are Americans, are pouring into Western Canada at the rate of more than 100,000 a year, a large amount of railway is being built and a second transcontinental, the Grand Trunk Pacific, will soon be under construction.

Canada's new schemes for the construction of another transcontinental road are inspired by belief in the immense agricultural resources of her northwestern territory.

Whether the swift-flying Americanization of the Canadian Northwest shall lead to closer trade relations or to actual annexation, we may be assured that our people will in the end get most of the benefit from this development of a new and distinct area.



Early Cotton beats the Boll Weevil

It can readily be proven to your satisfaction, that top dressing the cotton field with one hundred pounds (to the acre) of

Nitate of Soda

(THE STANDARD FERTILIZER)

increases the cotton yield materially, makes longer and better fibre and brings the crop to maturity rapidly enough to outstrip the ravages of the weevil. Two years ago I announced that forcing rapid growth and quick maturity was the true solution of the weevil evil. Continued experiments have proven the truth of the statement. Try it yourself. I will send to 1,000 cotton planters sufficient Nitate of Soda,

ABSOLUTELY FREE

to make the test on four one-hundred-foot rows of cotton, if the planter will pay transportation charges and use it as directed. The increase in cotton will more than repay this cost. Preference given to first applicants.

Send Address on Post Card for Bulletins and Conditions.

WILLIAM S. MYERS
12-16 John Street Room 145 New York

FOREST HOME FARM

Produces Four Crops—viz.,

**Jerseys, Jersey Cream,
Berkshires, and Berkshire Sausage,**

In producing Cream we have Skim Milk by the hundreds of gallons to feed our Hogs. Then we buy Germ Oil Meal by the car load. Now you know why our Hogs grow so rapidly, and are so in demand. Write

FOREST HOME FARM, Purcellville, Va.

50 POLAND-CHINA AND TAMWORTH

pigs, 3 and 4 months old, eligible to registration. \$6.50 will buy the best of them. The first orders will get the pick of the lot.

A few nice boars ready for service, also for sale.

J. C. GRAVES, Barboursville, Orange Co., Va.

EDGEWOOD STOCK FARM.

DORSETS.

Our FALL LAMBS are here, friends, and they are crackerjacks. Our Imported Ewes started lambing October 15th. Better give us your orders now. Last year many of you were too late.

J. D. and H. B. ARBUCKLE, Maxwellton, Greenbrier, Co., W. Va.



DON'T BUY GASOLINE ENGINES

all one cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost—portable, stationary or engine. Mention this paper. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mrs. Meagher & 15th St., Chicago, THIS IS OUR FIFTY-FIRST YEAR.

UNTIL YOU INVESTIGATE
"THE MASTER WORKMAN,"
a two-cylinder gasoline engine superior to
all other engines at small cost—portable, stationary or engine.
THIS IS OUR FIFTY-FIRST YEAR.

REGISTERED HEREFORD CATTLE AND BERKSHIRE HOGS.

EDWARD GAY BUTLER, Annefield Farm, Berryville, Va.



Grand Champion "PRINCE RUPERT No. 79539."

Hereford Herd headed by Prince Rupert No. 79539, whose son Prince Rupert 8th, won first prize in the 2 year old class at the recent Chicago International Show.

Berkshire Herd headed by Baron Premier No. 55227, whose son "Admiral Schley" won first in the 6 to 12 months class at the International Show 1902.

Young stock both calves and pigs for sale at reasonable prices.

CORRESPONDENCE INVITED.

Biltmore Jerseys.

The American Home of the Golden Lads.

Three hundred and forty of them in five separate herds. The deepest milking, healthiest, best bred and finest type that you can find.

During 1904, more cows in our herds have made fifty-two-week records of from 9,000 to over 11,000 pounds of milk, and from 600 to over 700 pounds of butter, than any other herd can show.

During 1904, 180 heifers and cows, young and old, have produced cream and butter which has sold for over \$32,000.

If you want profit, combined with good Jersey type, it will pay you to at least write us before buying elsewhere.

We will sell during 1905 eighty Heifers and twenty selected young Bulls out of our greatest Cows.

While other herds have now followed our example by using bulls from imported dams to fine up their home strains, *none of them have been able to secure these out of dams that have added great weekly and yearly milk and butter records to their good breeding and show records to the same extent as the Biltmore Farms' bulls show.*

Write what you want.

BILTMORE FARMS, Biltmore, N. C.

heretofore mostly disregarded in the measurements of our country's resources.

The United States may, in the future, produce relatively less wheat, but other and perhaps more profitable products will take its place. The process has been going on for several decades, as the centre of wheat production has marched steadily westward, only to be replaced by diversified agriculture, fruit-growing, dairying, stock-raising, etc.

If the ultimate home of the wheat-plant shall be found in the fertile valleys of the Saskatchewan and the Assiniboine, where, under a familiar botanical law, it reaches its highest perfection, near the most northern limit of its growth, our own farms will be all the more profitable from the better paying products which supplant it, as well as from the vast, new markets created for those products, in latitudes too cold for their successful introduction.

Our home consumption of wheat for food is over five bushels a year for each of our 80,000,000 people. The per capita consumption of this food is steadily increasing, due, perhaps, to the fact that higher prices for meats stimulate the consumption of the cereals. If, hereafter, Canada shall supply a part of this wheat, while our farmers devote their attention to crops that yield better cash returns, who shall say that we are the losers?

During the past three years, while our exports have averaged fourteen hundred million dollars, the farmers have furnished about nine hundred million dollars' worth of the products sent abroad. These exports have been the sheet-anchor of our financial safety in this era of inflation and speculation.

If Canada now comes in as a competitor, we may rest assured that one way or another, we will derive the lion's share of the benefit.

Every emigrant from the United States to the new Canadian Northwest makes the bond between the countries stronger.—The Sentry.

"An elephant must be a pretty expensive animal." "Yes, I wish I had enough money to buy one." "What do you want with an elephant?" "I don't, I merely expressed a wish for the money."

"Did you go into that speculation you were talking to me about?" "Yes," "What do you expect to realize from it?" "Just at present there's a strong prospect that I may realize what a fool I was."

"Don't you think," asked the proud young mother, "that he has his father's nose?"

"Well, I dunno," replied her old bachelor brother. "It hasn't come out of his face far enough to be seen yet."



We would like to talk to you just a few seconds on the value of the telephone to the farmer. Possibly you know its worth already, but would like to know more about the right kind to buy. If you buy a

Stromberg-Carlson Telephone

you can't go wrong. We have just published a book of meaty telephone information for the man that wants to know ALL about telephones. It's free. Ask for book F-113, "Telephone Facts for Farmers."

Stromberg-Carlson Tel. Mfg. Co., ROCHESTER, N. Y.
CHICAGO, ILL.

The Grove Stock Farm

I OFFER AT RIGHT PRICES THE FOLLOWING STOCK:

One yearling **HOLSTEIN-FRIESIAN BULL**,

Seven **BULL CALVES** (same breed), 2 to 6 months old
(These calves are from heavy milkers),

Six **BERKSHIRE SOWS** (1 year old),

Ten **BERKSHIRE SOWS** (5 months old).

All of the above will be registered and transferred to the buyer.

N. & W. and Southern Railways.

T. O. SANDY, Burkeville, Va.

OAK HILL FARM

**SADDLE and THOROUGHBRED HORSES,
ABERDEEN-ANGUS and JERSEY CAT-
TLE, BERKSHIRE, POLAND-CHINA, DUROC
JERSEY and TAMWORTH HOGS.** - - -

**WHITE PLYMOUTH ROCKS, WHITE HOLLAND TURKEYS, PEKIN
DUCKS and PEA FOWLS.** Eggs in Season.

SATISFACTION GUARANTEED. WRITE FOR PRICES.
Shipping Point, Oak Hill, (station on farm) D. & W. Railway 15 miles West of Danville, Va.

SAM'L HAIRSTON, Wenona, Va.

YORKSHIRE PIGS

Our spring pigs have all been sold and we are now booking orders for

FALL PIGS

for November and December delivery. The great display of Large Yorkshires at the recent Live Stock Show at the World's Fair, shows the growing popularity of this profitable bacon breed.

Also **Jersey Bulls and Heifers,**

from our high testing herd.

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WASHINGTON NOTES.

Washington, D. C. Dec. 17, 1904.

No branch of the Department of Agriculture is busier the year round than the publications division, of which George William Hill, an old agricultural editor, is chief. Mr. Hill is, in fact, the editor of the Department, and as such he is the greatest editor in the world. His editorial staff is also a big one. No other government does so much printing as the United States, and, as a rule, the editions of foreign publications are small, and copies sold and not distributed gratuitously. The idea of printing documents and distributing them free to the people is original with the United States. All the Departments issue publications for gratuitous distribution, usually by Senators and Representatives, but Agriculture leads all the others in the number of these publications, and I might hazard in their interest and usefulness. It is the enabling function of the Department to not only acquire information of interest to farmers, but to disseminate it. This it has been doing since 1840. During Secretary Wilson's incumbency it has become a practice to issue a great number of short, popular pamphlets and bulletins. Starting with a special Congressional appropriation of \$30,000 for such bulletins, two-thirds of which were for the use of Senators and members, this appropriation has been increased from year to year, until it is now \$105,000, and the number of farmers' bulletins printed last year was 6,435,000.

"The popularity of these bulletins during the last seven or eight years has phenomenally increased," said Mr. Joseph A. Arnold, Mr. Hill's active associate editor, "and this is due to the great interest Secretary Wilson has manifested in them, and to the further fact that farmers have learned that they can be obtained upon application. I believe the result of the dissemination of this vast volume of printed information has been a greatly increased interest in improved agricultural methods, with attention to details of cultivation, and to breeding and raising of stock. The further result is increased yields of improved varieties and better grades of stock for which higher prices are received by the farmer. We are glad to have applications from every farmer in the land for these farmers' bulletins. If they cannot be obtained from Senators or Representatives, the Department will endeavor to furnish them."

In looking over the records of these farmers' bulletins, I find there has been an immense run upon certain ones, indicating their popularity. For instance, Squab Raising (No. 177) has had four editions printed, and 110,000 copies have been sent out within the last year and a half; of the Primer of Forestry (No. 173), 170,000 copies have been distributed in that time; Bulletin No. 179, on Horseshoeing, is in its sixth edition, with 170,000 copies distributed; Bulletin No. 133, Meat on

THE OLDEST AND BEST. DR. HAAS' HOG REMEDY.

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Any reader of this paper who will remit direct to me for a can or half can of my Remedy at above prices, and will give same a fair trial for 30 days, may have his money refunded if at the end of that time he is not satisfied that his hogs have been benefitted, that the Remedy will do all that is claimed for it, and that it is the best hog remedy he has ever used.

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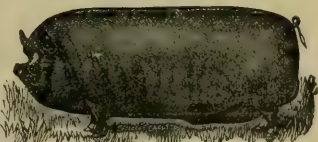
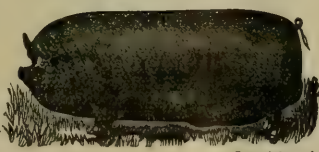
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P. T. FUNKHOUSER, Winchester, Va. Reference: Farmers and Merchants National Bank, Winchester, Va.



the Farm—butchering, curing, etc.—has proven unusually popular, and 200,000 copies have been printed since a year ago last July. Other bulletins ranging over 100,000 since that date are Marketing Livestock (No. 184), Poultry as Food (No. 182), and the Mexican Cotton Boll Weevil (No. 189).

Some of the earliest publications have been printed and reprinted over and over again; Weeds and How to Kill Them (No. 28), for instance, has been printed and distributed to the extent of 535,000 copies, and there are other bulletins with equally as good a record.

LABELS FOR ADULTERATED FOOD PRODUCTS.
The Department of Agriculture has issued an order requiring that all canned goods the contents of which have been artificially colored must be marked. When canned peas or string beans are colored with copper or when aniline dye is used to make cherries or strawberries or tomatoes a lovely red, the fact must be marked in plain type on the can—for instance, in letters not smaller than long primer capitals—Colored with Sulphate of Copper or Colored with Aniline Dye. One of the chemists, in discussing this order, said:

"There is not enough of the poison in one can of peas or such vegetables to do appreciable harm, but the damage will come if the peas are eaten day after day. Our investigations have proven this contention conclusively."

Much fun has been made of Professor Wiley's "Poison Squad" and his digestive experiments with adulterated and poisonous foods. The order above noted is an important result of this work and indicates an entirely practical outcome to the Doctor's plans.

There is a practice among the German vegetable growers of soaking asparagus in water, ostensibly to keep it fresh in appearance. Vice-consul Murphy, at Frankfort, reports semi-official tests which have shown that asparagus so treated absorbs water and increases as much as ten per cent. in two days, losing also considerable of its nutritious components, notably nitrogen. Contrary to expectations, it was found that where asparagus had been coated with paraffine it absorbed considerably more water but lost less of its alimentary value.

PURE FOOD LEGISLATION.

Senator Stewart, of Nevada, during the discussion of the pure food bill in the Senate, remarked that the press would not assist in the exposure, because "the patronage of the press is on the other side."

Seldom has a remark been made in the Senate more untrue. With the exact terms of the present pure food bill, the majority of the press may not be familiar, but with the purpose there is the fullest sympathy. The press is to-day supporting the movement to correct the evils the pure food bill seeks to overcome. To this activity, almost solely, is due the sentiment by

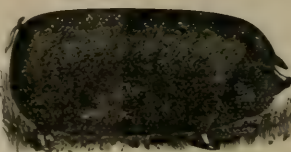
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POLAND CHINAS

I am selling them fast, but still have a few choice pigs, boars and bred sows left that I now offer at reduced prices in order to reduce my stock before Feb. and March litters arrive. I don't believe there is a better bred herd of Poland Chinas in Virginia than mine, and their individuality is so good that I am willing to ship, subject to return, at my expense if not exactly as represented.

My prices are lower than ever, for this month. Write for prices and testimonials.

J. F. DUKRETE, Birdwood, Albemarle Co., Va.

POLAND-CHINAS.

I have a limited number of Pigs by my fine Boars, Gray's Big Chief, 57077, and Victor G. 57075, and can furnish pairs not skin or related to those previously purchased. Young Boars and Sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address



GRAY'S BIG CHIEF, 57077.

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Importer and Breeder of POLLED DURHAM CATTLE.



Reds and roans. Can furnish bull calves or cows and heifers in car lots. **SOUTHDOWN SHEEP, POLAND CHINA HOGS.** R. F. D. 7, Harrisonburg, Va.

I find that a great many people think the POLLED DURHAMS are the Red Polls. There is not a drop of Red Poll blood in their veins. They are the SHORTHORNS with the horns bred off. My herd is headed with two blood red double-standard bulls. The oldest one is three years and four months old, and weighs one ton.

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grace of which the pure food bill is being pushed in Congress.

It is a comparatively simple demand, and one which ought not to be strenuously objected to by honest men—namely, to first bar out of the market poisonous and deleterious food products; and second, to brand harmlessly adulterated products so that people will know what they are buying.

When Congress becomes as unbiased and favorable to honest, pure food legislation as are the newspapers, there will be short shrift given to obstructionists to this legislation.

Consul Halstead, at Birmingham, reports a method of adulterating milk by the addition of foreign greasy matter. By a benzine test, which dissolves foreign fats without affecting the natural fat in milk, samples which have passed the ordinary butter fat test have been found to contain pork drippings, cocoanut butter, and other adulterants.

Representative Shiras, of Pennsylvania, introduced a bill on the day which Congress assembled providing for the protection of migratory game birds of the United States. Stating that experiments showed that many migratory game birds which nest in States other than those in which they pass the hunting season are subject to wholesale destruction and threatened extinction, the bill provides that all such birds shall be deemed to be within the custody and protection of the United States government, and shall not be hunted except under regulations provided by the Department of Agriculture, which shall not, however, interfere with State or Territorial laws.

Representative Roberts, of Massachusetts, immediately upon the assembly of Congress, introduced a bill appropriating \$250,000 to be expended by the Secretary of Agriculture for the extermination of the gipsy moth and the brown tail moth.

It seems that American incentive is becoming responsible for many things. For many centuries it was accepted as a foregone conclusion that the Manila hemp plant, a species of banana, whence comes binding twine and other rope products, could be grown only in the Philippine Islands. It was tried in Borneo, Sumatra and the Straits Settlements, but it proved a fizzle. It seems, however, that the Department of Agriculture is growing test plots in both Porto Rico and Hawaii, as well as in American greenhouses. Manila hemp will never be rotated with corn in the United States, but we may prove it to have a wider habitat than the Philippines.

The American Consul from Rouen reports that France's wheat harvest is estimated by the Minister of Agriculture at about 296,000,000 bushels, or some 60,000,000 bushels less than last year. While the crop is very light—with one exception the lightest in ten years—the quality of the grain is good. Even with the reserves, however, there is not enough for home consumption, and it is believed that fully 25,000,000



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to all points East of Colorado, except Indian Territory, Oklahoma and Texas. Write for prices for shipment to such points. This roofing at \$2.00 per square is our No. 10 grade, flat, semi-hardened, \$2.10 for corrugated, "V" crimped or pressed standing seam. \$2.25 for brick siding and beaded ceiling or siding. No experience necessary. Send us your order for immediate shipment. We have other grades.

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Hereford Cattle -:- Berkshire Hogs

REGISTERED—ALL AGES.

DORSET RAMS.


Toulouse Geese, Muscovy Ducks.

MOTTO: Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.

Rosemont Herefords.

We offer this month, the best bred bull in the state. He is yearling by the \$6,000 Imported Protector. Out of Dimple a sister to the Champion Russet. He is a fine individual and will be sold cheap.

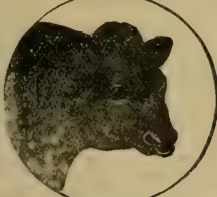


"A Brief History of Hereford Cattle" will interest you. Let us send you a copy. ROSEMONT FARM, Berryville, Clarke Co., Va.

—URY STOCK FARM OF—

HOLSTEIN - FRIESIANS

Have reduced our herd 25 head during the past two months, but would like to sell as many more before going into winter quarters. Herd headed by Dekol 2d, Butter Boy 3d, No. 2, which we can justly claim the best butter backed bull South of the Mason and Dixon line. Also a choice lot of English Berkshire sows from 3 to 9 mos. Sired by Manor Faithful, Fancy Duke and Esau Princess of Filston. Before buying write or come and see us. THOS. FASSITT & SONS, Sylmar, Md.



The Delaware Herd of—

ROYAL ANGUS CATTLE

is not surpassed either in breeding or individual animals, by any herd in the East. At the head of our herd is **PRINCE BARBARA, 68604**, the son of the great \$3,100 Prince Ito. Females of equally choice breeding. Write your wants. Remember, we take personal care of our cattle; keep a high priced help; incur no expense of exhibiting; all of which enables us to offer stock at equitable prices. Send for pamphlet.

MYER & SON, Prop., - Bridgeville, Del.

A neat Binder for your back num-bers can be had for 25 cents. Address our Business Office.

bushels must be imported. The consul states that there is a shortness of wheat in the whole basin of the Danube, in Roumania, Bulgaria and Serbia; there is a greatly reduced yield and also a short crop in Russia.

GUY E. MITCHELL.

THE LEHMAN HEATER THE BEST.

The Lehman Heater is no longer regarded as a superfluous luxury within reach only of the wealthy classes. It has come to be looked upon as almost a necessity for the home, carriage, wagon and sleigh.

This Heater has stood the test of hard usage for over eighteen years, and it has fulfilled every requirement; justified every claim that has ever been made for it. Every winter there are over 250,000 Lehman Heaters in actual use. They are "built for business," and sold on their merits.

The manufacturers of the Lehman Heaters are not only the original, but at the same time the largest and only exclusive makers of carriage and sleigh Heaters in the world.

In their booklet (free to the readers), containing 1904-'5 Price List, will be found some of the reasons why both the Lehman Heaters and the Lehman Coal are the best. It follows, logically, that being the best, they are the cheapest. Lehman Brothers, sole manufacturers, offices 10 Bond street, New York city, N. Y., 45 E. Congress street, Chicago, Ill.

OLD SAWS RE-FILED.

A watched pot never boils over.

A word to the wise is wasted.

A rolling stone gathers much experience.

A party and his money are soon fooled.

Modesty is the best policy.

A company is known by the men it keeps.

Discretion is the unpopular part of valor.

Time and tide could wait for no woman.—January Lippincott's.

The late Bishop Dudley, of Kentucky, made friends with the guide on a hunting expedition near Louisville, and they became quite intimate. After some good times together, the guide asked, "Say, Dudley, what business do you follow?" "I am a preacher," "Oh, get out! What are you giving me!" "But I am. I preach every Sunday in Louisville." "Well," said the guide, "you ain't stuck up like the preachers our way." And he accepted an invitation to hear his new friend preach the next Sunday. After the service the Bishop greeted him as familiarly as in the woods, and asked him how he liked it. The guide hesitated for a moment, then said, "Well, I ain't much of a judge of this kind of thing, parson, but I riz with you and sot with you, and saw the thing through the best I knew how; but all the same, if my opinion is wuth anything to you, the Lord meant you for a shooter!"

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76 Years.

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OUR SPECIALTY is the growing of Garden Seeds from Selected Seed Stocks. The great importance of following this system for the production of Seeds to insure fine vegetables is familiar to all gardeners; if vegetables from which seeds are grown are inferior or impure, so must their product be.

IF YOU HAVE a Garden, send for BUIST'S GARDEN GUIDE, for the South; edition for 1905 now ready.

IF YOU ARE a Market Gardener, send for OUR WHOLESALE PRICE LIST for TRUCKERS, now ready.

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We desire to engage a number of reliable, energetic agents to represent us during 1905. Salary or commission. Write for terms.

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GOOD HOUSEKEEPING.

OYSTER SOUP.

Strain all the liquor from two quarts of oysters. If there is less than a quart of liquor, add water to make that quantity. Put the liquor on in a closely stopped stewpan, and let it boil for half hour. Add a half cup of finely chopped ham, the lean; a tablespoon of chopped onion, salt and pepper and let it boil a while longer, then strain. Cream a cup of butter with a large spoon of flour or corn starch. Put the oysters into the soup and let them stay in eight minutes, then put the butter in and take it all off, and let it stand until dinner is ready. Just before serving add a quart of very rich milk and stir until it comes to a boil. Serve with crackers or toasted bread.

CHICKEN OR TURKEY CROQUETTES.

Chop enough of the cold fowl to make a quart. It is just as good if roasted or boiled. Season with salt and pepper and a teaspoon of celery seed, and a heaping tablespoon of chopped parsley, tablespoon of chopped onion, and a dash of red pepper. Put a pint of milk into a stewpan, and when it has reached the boiling point add two tablespoons of butter with four tablespoons of flour creamed into it. Let it thicken, stirring all the time, then pour it over the chicken and mix well, let it all get cold, then form into cakes or balls and fry in deep fat, first rolling them in raw egg and then in cracker or bread crumbs.

SALSIFY SOUP.

Parboil the salsify, then scrape it and cut into thin slices. Put it on with the remains of a roasted or boiled fowl and cover with water; let it boil until thoroughly done. To one quart of the salsify you should have two quarts of soup. Now add one quart of rich milk, two tablespoons of butter, two eggs beaten light. (Mix the eggs with a little cold water before adding to any boiling mixture.) Mix all well and season with salt, pepper and a dash of red pepper. Let it boil up and serve at once with toasted bread.

SALSIFY CAKES.

If salsify is scarce these may be made with half creamed Irish potatoes and half salsify, and are just as good. Cook the salsify before skinning; then scrape and mash to a paste, season with butter, pepper and salt, and form into flat cakes. Fry in hot fat and serve at once. For frying such cakes I prefer half lard and half beef dripping melted together.

SCALLOPED OYSTERS.

Drain the liquor from the oysters. Use the dish in which they are to be served. Put into the bottom of the dish a layer of cracker crumbs, not cracker dust; that is too fine; then put in a layer of oysters and sprinkle salt and pepper over them and little bits of butter, and a few scraps of chopped celery. Repeat the layers till the dish is full, and let the crackers come last. Pour over this some of the oyster liquor and as much milk to nearly fill the dish. These will take

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Thorburn's Seeds

For over a hundred years have been universally recognized as the standard of excellence. ***

Our Great New Potato Noroton Beauty

This is the most valuable introduction of the past half century. During that period we have done more for the improvement of the Potato than every one else combined. Beginning with the famous WHITE PEACH BLOW forty years ago the path of progress is marked with our introductions, many of which are household words the whole world over, BEAUTY OF HEBRON, WHITE ELEPHANT, RURAL NEW YORKER, CARMAN NOS. 1 AND 3—all ours. THE NOROTON BEAUTY, now offered for the first time, eclipses them all. Our Catalogue gives full description and testimony of many experts who have tried it.

It is the earliest potato ever grown, being sixteen days earlier than the Early Rose, yet it is as productive as any main crop or late sort. It is handsomer in appearance and more uniform in size and shape than any other sort. The tubers are all of marketable size, and they ripen all at the same time, a fact which combined with its extreme earliness does away with all danger from blight or disease or bugs. Its table quality is superb, and it keeps good longer than any other sort early or late. It is far and away the BEST ALL-ROUND POTATO IN EXISTENCE, and the farmer or gardener who fails to get stock seed of it now will surely feel let a year hence. Even one pound will insure a good supply of stock seed, it being so enormously productive.

Price, 1 pound 75 cents, or by mail or express 85 cents; 2 pounds \$1.30, or \$1.50 express prepaid; 4 pounds \$2.40, or \$2.75 express prepaid; 8 pounds \$4.25, or \$5.00 express prepaid.

Price on larger quantities quoted on application.

OUR CATALOGUE—the 104th successive annual edition—contains a more complete assortment and fuller cultural directions than any other seed annual published. It is beautifully illustrated with the finest half-tones and a superb colored plate of our great new potato "Noroton Beauty." It contains 144 large size pages, and is in every respect and without exception the most complete, most reliable, and the most beautiful of American Garden Annuals. We will mail it FREE to all interested in gardening or farming

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APPLES, PEACHES, PEARS, CHERRIES, PLUMS, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

about an hour to cook. If the dish is very large, it will take an hour and a quarter.

DRIED APPLE PUDDING.

Soak the apples all night in water to cover them. In the morning let them come to a boil and set back on the stove to keep hot for an hour; then take them out and put a layer of the apples in the bottom of a baking dish, then sweeten and sprinkle powdered cloves over them. Add a layer of bread crumbs and another layer of apples, till the dish is full; have the crumbs on top. Put dabs of butter all over the top cover with a pie pan and let it bake slowly for an hour. Take off the pan and brown. This is a good way to make people eat dried apples without finding it out. Serve hot as a vegetable.

DRIED APPLE PIE.

To three pints of the cooked apples (strain them through the sifter) add the beaten yolks of eight eggs, one cup and a half of creamed butter, six cups of sugar, a whole nutmeg grated, a teaspoon of lemon extract, a cup of flour mixed with a cup and a half of rich milk. Mix all the ingredients together, adding the apples last and bake in rich pastry. When they are done spread meringue, made of the whites of the eggs and two cups of sugar, seasoned with lemon, over them and brown. These are not cheap pies, but they are good. This makes nine deep pies.

CHEAP SPONGE CAKE.

Six eggs, beat the yolks very light, and add three cups of sugar. Beat them hard and add one cup of cold water. Beat the whites to a froth and add them, alternating with four cups of flour; season with nutmeg and bake in sheets in biscuit pans. This is a nice cake for a dessert with chocolate custard as a sauce. This sauce is made by adding two ounces of grated and melted chocolate to two pints of milk. Thicken with a tablespoon of corn starch and sweeten with a cup of sugar. Add two eggs beaten without separating.

POOR MAN'S PUDDING.

Five eggs beaten separately, one quart of rich milk, a pint of flour, sifted, added to the milk and eggs very slowly, and a teaspoon of salt. Pour into a pudding dish and bake very quickly. Serve the minute it is done with wine sauce.

WINE SAUCE.

Dissolve a cup of sugar in a cup of boiling water; add a tablespoon of corn starch dissolved in cold water. Let it boil until clear. Cream a half cup of butter until light, and after taking the sauce from the fire add to it a cup of light wine and a dust of nutmeg. This is good with almost any pudding. I think a tablespoon of brandy and less wine makes a better sauce.

ANOTHER GOOD SAUCE.

Beat a cup of butter and a cup and a half of sugar together until very light, adding slowly two wine glasses of wine and a little grated nutmeg. When it



POWER OF THE MACHINE: 256 TONS.

This is our new Twentieth Century Stump Puller, made of semi-steel; specially adapted for clearing land of all kinds and sizes of trees, stumps, grubs and brush. This machine will clear from one to five acres a day, doing work equal to twenty men. Every machine is equipped with our patent 25-foot Anchor rope, 1 inch diameter; 50-foot pull rope, 3/4 inch diameter; one improved Snatch Block, 50-foot Hitch Rope attached, 1 inch diameter; short Anchor Loop, for light pulling; Automatic Sweep lift; Pawl; Key; the necessary bolts, and everything complete except the cross-pole and sweep, which are cut in the timber where the machine is to work. We will lay this machine down at your nearest railroad station, freight paid, without any \$100. further expense to you, for

Warrent and Guarantee. Every Smith machine is warranted against breakage, and is sold under a positive guarantee to give satisfaction or money refunded.

Terms: Send \$17. with your order, to guarantee freight charges, and we will make shipment and collect the balance C. O. D.

W. SMITH GRUBBER CO. LA CROSSE, WIS. U. S. A.

THE Smith Great Western Endless Apron.



When you load it you know its parts are equal to their duties.

Every Acre Produces A Third More

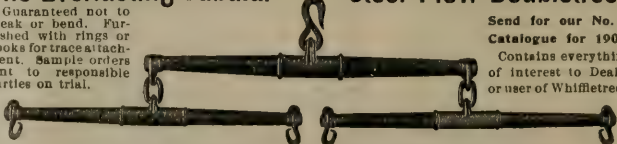
by a proper top dressing of manure. The Great Western does it evenly, thick or thin.

as wanted, and equals 15 men with the fork. Spreads so you get the full manure value—none thrown in chunks or piles to waste. Handles manure in all conditions, and all kinds of fertilizers. Endless Apron, Hood and Endgate, Non-Bunchable Rake, Light Draft, Ball and Socket Bearings, Strength and Durability, are exclusive Great Western features. Sold under strong guarantee. Stocks carried and shipments made from cities in your section. Write for catalogue, showing latest improvements. It tells how to apply manure to secure best results.

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The Everlasting Tubular Steel Plow Doubletrees

Guaranteed not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



PATTERN No. 105 EQUIPPED WITH FORGED TRIMMINGS.

Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

Pittsburg Tubular Steel Whiffletree Company.
SOLE MANUFACTURERS
PITTSBURG, - - - PENNSYLVANIA.

Send for our No. 8 Catalogue for 1904. Contains everything of interest to Dealer or user of Whiffletrees.

is light put it on the stove in a pan of hot water and stir all the time. Take off when it looks creamy and serve with any pudding or cake.

CARAVEN.

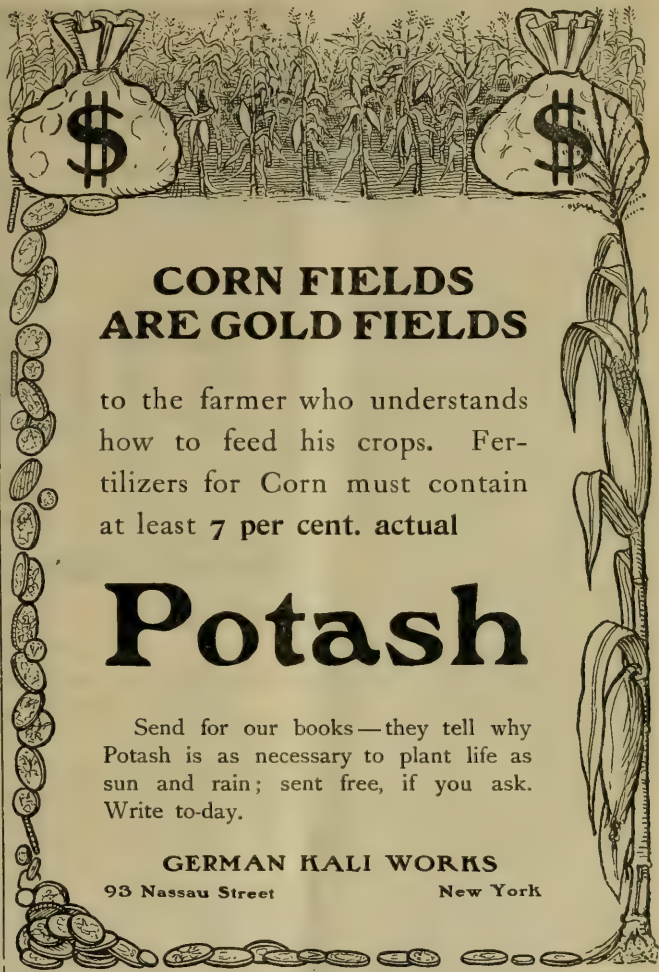
THE BY-PRODUCTS OF COTTON.

Mary Washington.

Southern people used to be called "unthrifty," and were said to "despise the day of small things." But if this was ever the case, it certainly is not so now. Our changed condition since the war has developed in us a wonderful amount of thrift and enterprise. No more striking proof of this could be alleged than the numerous by-products which have been gradually evolved from cotton within the last thirty years, all due to the thrift, enterprise and inventive talent of the South. Before the war, though we proudly proclaimed that "Cotton was king," it was a monarch reigning in solitary state, without the numerous offspring which have since come into existence, the varied by-products which have so enormously increased the usefulness and value of the cotton crop. It is true that as far back as 1769-70, the Moravians of Bethlehem, Pa. (a singularly thrifty and practical people), expressed a small quantity of oil from cotton seed, and presented it to the American Philosophical Society, but no result followed from this. The South Carolina Agricultural Society, soon after its organization in 1785, offered a premium medal for oils from cotton and other seeds. A patent was issued in 1819 for a preparation of food from cotton seed, and in 1820, one for a method of extracting oil from the seed. In 1833, a large manufactory of oil from cotton seed was established at Natchez, Miss., and others were built at Mobile, Ala.; Florence, Ga.; and Petersburg, Va., but the work was carried on intermittently, and the business was not successful in those days.

Thirty years ago, in every Southern State, cotton seed was thrown away as worthless, or used as fuel. It was a waste product. To-day, cotton seed has a high commercial value by reason of the machinery invented by a long list of Southerners to utilize it. The industries using cotton seed operate 357 establishments, and their products bring us annually over \$42,000,000. These industries are purely Southern, and all their appliances are the work of Southern brains. I copy from a U. S. Government diagram a list of the products obtainable from cotton seed: cotton waste, linters, hulls, meats from feeding the hulls, cotton seed meal, oil cake, fuel, cotton batting, fibre, ashes, paper, fertilizer, soap stock, cotton seed stearine, winter yellow oil, summer white oil, miner's oil, candles, lard, cottonolene and butter, salad oil.

The last named article (salad oil) is made from the crude oil by a process of refining, and is a clear, light yellow, without perceptible odor, and in flavor resembling the finest olive oil. There



CORN FIELDS ARE GOLD FIELDS

to the farmer who understands
how to feed his crops. Fer-
tilizers for Corn must contain
at least 7 per cent. actual

Potash

Send for our books—they tell why
Potash is as necessary to plant life as
sun and rain; sent free, if you ask.
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Being the largest depository for banks between Baltimore and New Orleans,
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SOUTHERN PLANTER.

is such an agreement between the properties of the two that it is difficult even for experts to distinguish between them. This fact has led to large quantities of the cotton seed salad oil being shipped to the Mediterranean ports, from which, mixed with more or less olive oil, it is reshipped to us and other consumers as "pure olive oil." The degree to which this deception was practiced led to the Italian Government's laying quite a heavy import duty on cotton seed oil in 1881. As a salad oil, it is largely used in this country, although the consumers are, for the most part, ignorant of this fact, as hotel and restaurant keepers label it "olive oil" in deference to the prejudices of the public. Cottoleone, too, is steadily making its way in the public favor, so much so that the lard dealers of the West complain of its having injured their trade. At a meeting of the Baltimore Grocers' Exchange, some time ago, the committee on cotton seed oil reported its great superiority over lard in every respect for cooking purposes. They claimed that it was cleaner, more healthy and nutritious, free from any unpleasant taste or odor, went further in cooking and never became rancid. The oil can be converted by pressure into a butter, which is largely used by Jews, who have religious scruples about using lard.

SIX SAYINGS TO REMEMBER.

Out of a large number of quotations selected by its readers the Woman's Home Companion for January prints the following as the six most helpful mottoes for the New Year. They are worth remembering:

"There is something better than making a living; making a life."

"Our success in life depends upon our will to do."

"It is never too late to be what you might have been."

"Great principles are in small actions. If we fail in our present circumstances to live nobly, we need not imagine we should have done better on a grander scale. Develop great character in simple duties and in inconspicuous trials."

"To be of good cheer in case of disappointment; exercise greater charity toward the erring, and make more allowance for the opinions of people whose views differ from mine; to smile more and frown less."

"To be honest; to be kind; to earn a little, and to spend a little less; to make upon the whole a family happier for his presence; to renounce, when that shall be necessary, and not be embittered; to keep a few friends, and these without cantillation; above all, on the same grim condition, to keep friends with himself—here is a task for all that a man has of fortitude and delicacy."

The Hatter's Comment—"How gracefully young Skivett raises his hat." "I wish he could raise the price of the hat half as gracefully."

When the World Goes Gunning

the favorite arms are the "STEVENS," the rifles, pistols and shotguns that have made this name stand for "best" wherever firearms are used. For accuracy, durability, safety,—the peerless



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Maynard, Jr., \$3
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STEVENS

Our valuable 140-page book tells all about the "Stevens," with articles on hunting, shooting, the proper care of firearms, notes on sights, ammunition, etc. Every lover of outdoor life should have it. Sent Free if you will send 4c. in stamps to cover postage. Write for "Rifle Puzzle"—it is Free, postpaid.

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Save and Improve Your Farms.

The only successful plan is to properly terrace and ditch them, and to do that work right a reliable instrument is absolutely necessary.

OUR AUTOMATIC FARM LEVELS

are the only instruments made that are adjustable for both terracing and ditching.

They are self-adjusting, perfectly accurate and so simple that any farmer can operate them successfully without any previous experience or training.

The price paid for a farm level cannot be better invested, and it pays to buy the best.

We make four grades of farm levels, with and without telescopes, from \$6 to \$18. Also Architects' Levels, from \$12 to \$25.

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INSIST ON HAVING THE GENUINE YAGER'S SARSAPARILLA with CELERY.

BECAUSE
It cures Nervous Diseases and all ailments
and conditions induced by poor
and impure blood.

IT NEVER DISAPPOINTS THE USER.

It acts on the blood, nerves, kidneys, bowels and skin, and helps every organ of the body to greater efficiency. The general uses of this famous blood renewer and purifier are so well known we will not repeat them, but give herewith a list of the ailments wherein **Yager's Sarsaparilla** may be used with extreme advantage, and with the assurance of immediate relief and permanent cure.

Diseases of the Stomach, Liver, and Kidneys, Loss of Appetite, Sick Headache, Rheumatism, muscular or chronic, Dimness of Vision, Emaciation, General Debility, Female Weakness and all Blood and Skin Disorders.



Eruptions, Disorders, Facial Blemishes, Pimples, Tumors, Boils, Ringworms, Blotches, Scrofulous Afflictions, Cancerous Humors, Salt Rheum, Tetter, Catarrh, Syphilis, Mercurial and Malarial Poisoning, and other depraved conditions.

For all these diseases, **YAGER'S SARSAPARILLA WITH CELERY** will prove a quick relief and a certain cure. Simply follow the directions closely as given in the printed directions, and surprisingly gratifying results will follow.

YAGER'S SARSAPARILLA will cure these diseases, all of which have their origin in depraved or bad blood.

That most obstinate and dreaded of all diseases, Syphilitic Poison, is rapidly and radically removed from the system by the use of this invaluable alternative.

A FEW OF MANY INTERESTING LETTERS.

Smithfield, Fayette Co., Pa.
I have suffered greatly from kidney trouble. On getting up of mornings I could hardly straighten up for pain in my back, and my appetite was poor. I have taken one bottle of Yager's Sarsaparilla with celery, and it has done me so much good I am now on the second bottle, and feel better now than I ever did, and will be glad to write to any one who wants to know how this medicine acted with me.

Yours truly,

RICHARD GLIDDON.

Mt. Carmel, Pa., 318 Center St.
Yager's Sarsaparilla with celery is the best medicine we ever used in our family. My little boy had dropsy after a case of scarlet fever, and the doctors could not do him any good, so I got three bottles of Yager's Sarsaparilla and it cured him. I myself had kidney trouble, and two bottles cured me, and think it is the best medicine I ever used.

Yours truly,

MRS. A. TOLAN.

Gaylord, Va.
I have used Yager's Sarsaparilla with great success, for several years with rheumatism, and doctored with different medicines, which gave relief for a while, but it would come back. I commenced to take Yager's Sarsaparilla over a year ago. I took three bottles, and have not been troubled with rheumatism since. It is a splendid medicine, and has been a great benefit to me.

Yours truly,

H. T. CORNWELL.

It is of special and most wonderful service in the relief and cure of that large number of ailments, more or less painful and weakening, known as Female Disorders. Its influence is for good with almost the first dose.

Sold by all Druggists and Dealers
50c PER BOTTLE.



GILBERT BROS. & CO., Baltimore, Md., U. S. A.,
SOLE PROPRIETORS.

LONG-RANGE WEATHER FORECASTS.

There are very few departments of human activity of the present day which are not affected in some degree by the weather. In commercial pursuits the rise and fall of prices in many lines depend upon it and it controls the shipment of vast quantities of perishable products, while in the professions we find weather deciding some knotty legal point or furnishing the doctor with material for advice to a patient in need, perhaps, of a change of climate. Into no single avocation, however, does it enter more largely than that of agriculture.

To the farmer, therefore, the reward for whose labor is, first and last, dependent upon soil and weather, the question of the latter is of paramount importance; paramount, because while he may select his soil or by proper management so modify or overcome its deficiencies as to make it available for his purposes, he cannot so control the weather; but, on the contrary, is in the end dependent upon it. It determines his seed-time and harvest, the full or empty granary; the success or failure of a season. Recognizing this, the first inquiry that naturally suggests itself to him relates to the character of the coming season and what provision he must make for it. It is not strange, therefore, that some of them in the endeavor to satisfy this want and lacking authoritative information, turn to those sources promising to supply it, the long-range forecasters. The matter of trustworthiness does not appear to enter into the question at all. They want a long-range weather forecast on general principles, and they get it—on just that basis. It is not difficult to find a number of persons who will supply it.

If one were asked to define the occupation of a long-range weather forecaster he could with propriety reply, "a dealer in generalities." Through impressive combinations, permutations and arrangements of the planets of our system, he sees atmospheric disturbances anywhere from six months to a year before they occur, and outlines the regions in which they may be expected with a painstaking uncertainty. He ignores such trifles as time and space unless the one be construed in months or years and the other in areas as large as the continent. The mutabilities of the weather perplex him not at all, for the stars in their courses have already decreed the things to be looked for. There is needed only an interpreter, and he is it. Accordingly, a schedule of "weather happenings to be" is made up by these astrological gentlemen, interesting perhaps from some points of view, and full of the flavor of uncertainty. The reader passes on in search of a local habitation for the predicted events, and he travels a long journey without finding it. He will then begin to realize that the term "long range" does not refer to time alone. It is quite sure that if any citizen of the

2 Acres to One

No. 4
Combined
Drill



No. 12
Double
Wheel
Hoe



Planet Jr. Garden Tools

have revolutionized gardening as the self-binder has harvesting. They make it possible to double the size of your garden, yet *retain* your work. They pay for themselves in a season. Every planter ought to have our 196 Planet Jr. catalog, the best single book of garden tools ever published. Write to-day for a free copy. It is beautifully illustrated, describes the entire Planet Jr. line, including plow and combined seeder, wheel hoes, hand and walking cultivators, harrows, and two-horse riding cultivators, sugar beet cultivators, etc. The

Planet Jr. No. 4 Combined Drill

is unmatched in its usefulness. It is a drill, a seeder, a marker, a hoe, a cultivator, a plow. Change from one to the other in a moment. Its seedling device is simplicity itself and is thoroughly dependable—drops the seed, covers different depths, rolls down all as fast as the operator can walk. Simple, strong, durable—light enough for a boy.

No. 12 Double Wheel Hoe

is a pioneer in hoeing, cultivating, plowing. Throws earth to or from either side. Works between 41 astrile rows, kills weeds, makes furrows, ridges, etc. Adjustable wheels. Various attachments combined instantly. For durability, lightness, easy running and all-around use, just work it and be beaten.

Be sure to get the catalog. A postal will bring it.

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Larger Crops at Less Cost

is always the result of using Iron Age implements. Being built to get the greatest possible results for labor expended, they do farm and garden work better and quicker than any tools made. A new Iron Age implement, and one that is very successful is No. 19—Wheel Plow and Cultivator. It is simple, strong and light running. Combines the best wheel plow and cultivator ever produced. Like all other Iron Age implements, it's guaranteed to give entire satisfaction.

You can make more money, save more, and lessen your work, if you send for the Iron Age Book for 1905. It describes Seed Drills, Wheel Hoes, Riding Cultivators, Potato Planters, Horse Hoes and Cultivators. Gives you the prices and all details. The book is free. Write at once.

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6 STYLES SEEDERS Double or Single Wheel Hoe, **6 Tools in 1.**

Opens furrows, drops in plants, covers, marks. Models of Accuracy. Cultivator, Plow, Rake. Changes quickly made. Cultivate between or astride the rows. Any depth, any width. Combined seeder, cultivator, hoe, rake, plow, marker. Single or double wheel. Every adjustment made easily made. For planting and all kinds of cultivation.

Note High Arch and Plant Guards. Bent Oak Handles on all Tools.

Send for FREE BOOKLET of valuable information for planting and cultivating the garden and field. Description of these implements.

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SYRACUSE Single Disc or Gang.

The Plow for Perfect Work.

In any soil where any disc plow can be used we guarantee it to draw lighter and do better work than any other. Easily changed from single disc to gang.

A FLEXIBLE PLOW.

Rigid at work, flexible in turning. Makes square corners without having to stop. No danger of upsets. Talk with the Syracuse agent or send for catalog; tells all about the great Syracuse Disc.

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THE \$500,000,000 WORLD'S FAIR

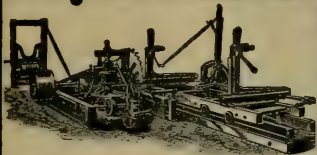
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100,000,000 Feet of Highly Seasoned Lumber

SEND US YOUR LUMBER BILL FOR OUR ESTIMATE

SAVE FROM 30 TO 40 PER CENT. Also Sash, Doors, Roofing of all kinds, Pipe of all kinds, Wire Fencing, Hardware, Machinery, Household Goods and Furniture of every description, besides thousands of other items. ASK FOR OUR CATALOGUE NO. 166. We purchased every description of material on display.

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FARQUHAR VARIABLE Friction Feed SAW MILL,

ward by means of the Reamy patent feed and backing device.

ALL ABOUT THEM IN THE CATALOGUE.

with patent feed, patent dogs and set works is the most convenient, durable, perfect in operation, and the cheapest high-class mill on the market. There are more of these mills in use than any other make, because they combine all the latest improvements. The sawyer standing in one position, controls the engine, sets the log, and regulates the feed of the carriage. The carriage is moved forward and backward.

Pennsylvania Disk or Hoe Drill.

This Low-Down Disk Grain and Fertilizer Drill is mounted on a steel frame, giving it great strength and lightness. Each disk works independently and has an adjustable coil spring pressure of its own—enables the disk to cut its way through corn stalks, stubble, weeds, grass, etc. It is sure to put in the seed every time. Chain drive force—seed, grain, grass or phosphate. No gear—Davis feed power from center of main axle. No jolt—saves horses' necks. Accurate grain, grass, phosphate, and land measure.

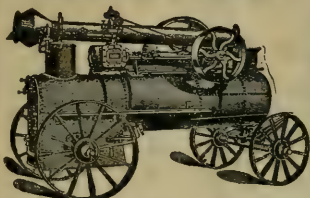


LOW DOWN, EASY TO FILL.

Here is a name

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"IMPROVED" AJAX THRESHING ENGINE.

This portable Engine is made most carefully of the best material. The Boiler is made of the best grade of boiler steel, tensile strength, 55,000 to 60,000 pounds. The steel fire boxes are strongly riveted and tested at double the strain they will ever be required to use. No Farquhar Boiler ever exploded. The engine parts are of the most improved patterns, and of the best material known. You ought to know about this engine.

All these things fully described in the catalogue. It is free. Also full line including all kinds of farm machinery.

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threshes more rapidly, saves all kinds of grain and delivers it in better condition than any other made. No cracking or wasting of grain. The separating capacity is very large and the machine cannot be clogged. It will easily take care of all the grain that can be put through the cylinder without wasting power. We build separators of seven different sizes, all described in the catalogue. We also make Clover Huller Attachment.



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Agricultural Implements and Machinery.

Threshers, Horse Powers, Corn Planters, Corn Shellers, Smith Well Fixtures, Genuine Smith Straw Cutters. Peanut Machinery, Baling Presses.

Tobacco Machinery, Trucks, Screws, Elevators, Hand and Power, for Stores, Factories and Warehouses.

Successors to J. W. CARDWELL & CO. and H. M. SMITH & CO.

Old Dominion wished to know the weather for to-morrow, next week or the Fourth of July, in Virginia, he would not find a prediction for it in the publications of the long-range forecaster. True, he might find a forecast for the Rocky-Alleghany valley, within three to six days one way or the other of the date or dates desired, applying with admirable impartiality to the entire territory east of the Rocky Mountains, but the specific kind of weather he might reasonably expect for his locality or State would be conspicuously omitted to be given. Should thunderstorms be scheduled for the above region between the 1st and 6th of July, it would be passing strange did they not occur, for it is highly improbable that any six days in the month of July have elapsed without a thunderstorm somewhere between the Rocky Mountains and the Atlantic seaboard; hence the chance of failure is about equal to that of finding a needle in a haystack. It is almost a certain thing to be verified somewhere, the place to be determined afterward.

Now herein lies the craft of the long-range forecaster; that his weather prediction periods average four to the month, whereby the narrowing of them down to any one day is skillfully avoided, and that the region to which these prediction periods apply is so large that only an abnormal condition of weather can prevent the forecast from being realized in some one part of it—an ingenious, if not ingenious arrangement.

His success, therefore, is in direct proportion to his ability to deal in generalities. All sensible people will agree that a weather forecast based on correct principles and sufficient data, and made by a competent meteorologist for a time and area that will admit of its being verified as to its accuracy, has a fixed, definite and valuable place in the world of business to-day, no less than in that of science. But such a forecast is not a long-range forecast. It is something tangible, as it were, which one can say has succeeded or failed according to the results. And it is largely this quality of definiteness that makes for its value and usefulness, and has earned for it a recognized and established place in the commercial and agricultural life of the country.

It has long been an aphorism that "you can fool most of the people some of the time and some of the people most of the time, but you can't fool all the people all of the time." The day is rapidly passing in which the long-range forecaster will be able to continue fooling the people.

All important civilized governments of the world have provided weather services for the benefit of their people. Their object is to gather and distribute the best and most reliable information on the subject that knowledge, skill and care make possible. Probably no nation has a more efficient service of this kind than the United States. Thorough business principles



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FOR 5 H P GAS ENGINES

Grinds Ear Corn and Shuck Corn.

Capacity 12 to 18 bushels per hour. Safety Quick Release. 50 other sizes and styles of

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Sweep-gear, Combined and Power. Most efficient and economical mills on the market. Simple, strong and durable. Write for new catalogue C-5.

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Three
Larger
Sizes.



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THE YORK Improved Weeder

The flexibility of the teeth is the important thing in a weeder. The York Improved Weeder has teeth of square spring steel with round points. These teeth have great flexibility, and being narrow in the body they do not whip or bruise the growing plants as flat teeth do. This style also allows more clearance and prevents clogging. Our square teeth do not break. The frame is made of strong flexible angle steel and handles and shafts are adjustable. Send for free circular. The Spangler Corn Planters and Grain Drills are the best for you to use.

SPANGLER MFG. CO., 505 Queen St., York, Pa.

Latest Improved FARM IMPLEMENTS FOR 1905.

HAND POWER CUTTER.

These machines sell at sight. They have heavy fly wheels and make three cuts to each turn of the crank. They will cut hay, straw or fodder, and will cut from $\frac{1}{2}$ to 2 inches. They are shipped K. D., securing the lowest possible freight rates.

CUMBERLAND VALLEY CORN SHELLERS,
One and Two Hole.

The frame is made of thoroughly dry hard wood. The joints are mortised tenoned and bolted. The bearings are bolted on the frame instead of screwed. The iron work is made from the very best material, every piece is carefully inspected before being put on. This machine is high-grade all the way through. It is handsomely painted, striped and varnished.



ROSS....

Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saws.



Wood Saws for long or short wood. Wood or Steel frame.



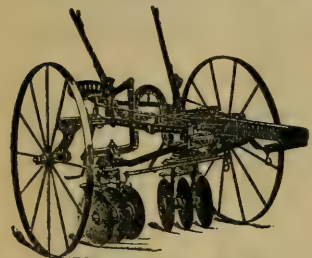
Triple Geared, Double Action. Opens as easy as a watch.



POWER MILLS in five sizes
2 to 30 horse-power.

Scientific Sweep Mills in five sizes.
Geared—plain and combined, with horse-power attachment.

Aspinwall Planters, Potato Sorters and Cutters.



CEMENT DISC CULTIVATOR, with 6 or 8 DISCS

Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day.



CAÑON SEED SOWER, MICHIGAN WHEELBARROW SOWER.



Kemp's Twentieth-Century Improved Ma-Plain and Lever Spring Tooth Harrows.

Write for special catalog and price on any Improvements.



Special prices given on Studebaker and Brown Wagons, Buggies and Carts.



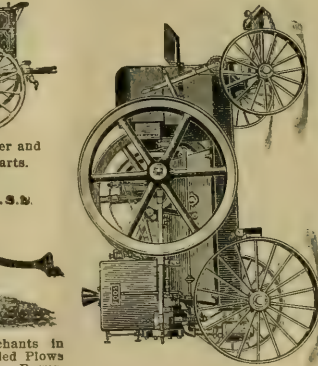
1905.

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All Sizes.



THE "ROSS" GAS AND GASOLINE ENGINES, All sizes. Mounted or Unmounted, as wanted. Write for prices and catalogues. Also Eclipse, Frick and Autman and Taylor Engines. Saw Mills and Threshers.



ELI BALING PRESSER, in styles and sizes, for horse or steam power. Write for prices and catalogues.

HENING & NUCKOLS, Successors to CHAS. E. HUNTER, 1436-38 E. Main St., RICHMOND, VA.

are applied in its management, and its chief requires for the public the most efficient service that modern methods are capable of giving. To this end he has selected a staff of assistants of ripe experience, sound judgment and proved ability. The fact that these officials, who are considered as experts in their profession, do not forecast for periods longer than thirty-six hours unless under unusually favorable circumstances, should be sufficient evidence for the unbiased that the thing cannot be honestly done, and that any attempt to do so at the present time is misleading in its aims and utterly unworthy of confidence. The truth about these things should be made known and the public warned against these fallacious and harmful long-range forecasts, of which a well-known physicist and meteorologist has said: "They are no better than the forgotten predictions of astrology of centuries ago."

EDWARD A. EVANS.

SOMETHING ON HIS WORKS.

A certain old darky preacher, who "boarded round" among his parishioners, awoke one Sunday morning feeling far from well. He made one or two efforts to rise, but his head swam and ached and he felt "the misery" in every bone.

"Br'er Johnson, Br'er Johnson," he called to the worthy Deacon with whom he was then domiciled. "Br'er Johnson, 'clar to goodness I jes' can't preach dis beah mo'nin', nohow. I's sick, dat's w'at I is. You-all jes' go up to de meetin'-house an' tack up a notice to say dat dar won't be no preachin' dis mo'nin'."

"Aw, Elder Dusenberry, you hadn't oughter gib in to de ills ob de flesh lak dat," said Deacon Johnson, reprovingly. "You mak' a' effort to rise, mah frien.' Shame de debbil an' his pains 'll leab you.' T'ink what a disappointment you's gwine to gib all dem nig-gah—lettin' 'em git all fixed up fer meetin' in deir bes' clothes, an' den fin' dere ain't gwine to be none."

So spake Br'er Johnson, with much more to like purpose. Thus admonished, the preacher rose and, with many groans and lamentations, dressed. A hearty breakfast and a turn in the fresh air gave him the strength of mind and body to face his congregation, and as the services proceeded he warmed to his work, delivering an even more fervid discourse than usual.

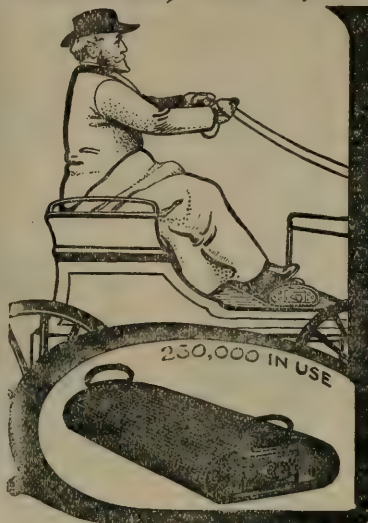
When he arrived at home after meeting Br'er Johnson greeted him anxiously.

"Well, Elder Dusenberry, how you feel?" he asked, solicitously.

"Oh, I feel fust-rate, Br'er Johnson. Spry as a sparrow, I is. An' I wants to thank you, Br'er Johnson, for a stirrin' me up dis mawnin', an' keepin' me in de paf ob duty."

"Oh, dat's all right, Br'er Dusenberry, dat's all right. I knowed you'd be all right as soon as you got dat sermon out ob your system."—Lippincott's.

The Best, North, South, East or West



is the general opinion formed by those who use the celebrated

... LEHMAN ... Carriage and Sleigh HEATERS.

They are the original, having been on the market for 20 years, and are known as the Standard.

250,000 of our Heaters are in use. They are universally known to be the STANDARD, and are used by horsemen, physicians, farmers, etc., everywhere.

They burn Lehman Coal, which gives no smoke or smell, and from which there is no danger whatever. It costs only 2 cents per day to heat them. Be sure you get the LEHMAN if you want the BEST. Beware of imitations. Our heaters and coal are sold by leading dealers everywhere.

Send for our illustrated booklet, and mention this paper.

LEHMAN BROS. Mfrs.
10 Bond St., New York.
J. W. ERRINGER,
General Western Sales Agent,
45 E. Congress St., Chicago, Ill.

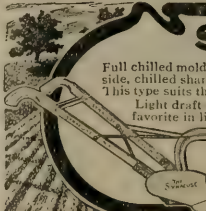
The Spraying Season



Will soon be at hand. In order to be prepared let us send you catalogue, so that you may select the size and style Pump suited to your requirements.

Small Boilers, Feed Cookers, Gasoline Engines, Wind Mills, Tanks, Rams, and Country Plumbing.

SYDNOR PUMP AND WELL CO., Incorporated,
Box 949, RICHMOND, VIRGINIA.



Syracuse Chilled Plow.

For General Purpose Work.

Full chilled moldboard, sloping chilled land-side, chilled share with slip piece combined. This type suits the man who wants a plow.

Light draft and easily handled—the kind that suits the farmer's boy. A special favorite in light soils, but does satisfactory work everywhere. Both right and left hand. Before you buy a plow, talk with the Syracuse agent or write us for catalogue, showing every style plow for every purpose.

Syracuse Chilled Plow Co., SYRACUSE, N.Y.

The Power Behind the Style

In other words, Quality is what gives the customer real satisfaction and the dealer a trade he can look forward to. But in these days of so many imitations it is sometimes hard to tell the false from the true.

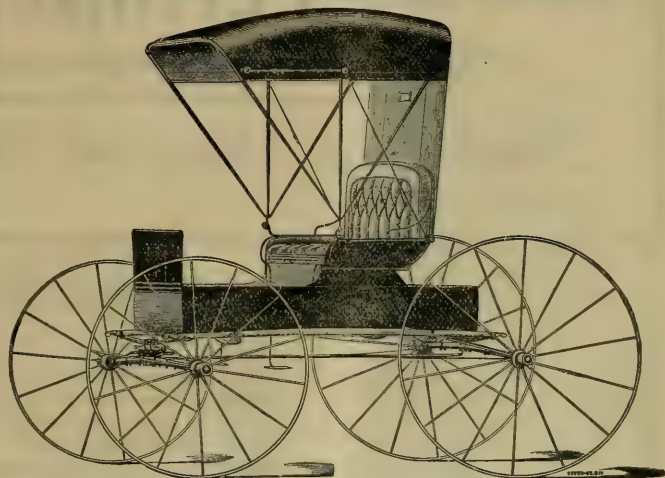
You know a little paint and varnish will cover a multitude of defects in construction, therefore when ordering vehicles it is well to look for a line with an honest reputation, and such is comprised of

VIRGINIA-MADE VEHICLES.

They contain "no hinge or loop to hang a doubt on."

They're true blue all through, and are priced to please the people and profit the dealer.

We've proved it to others - how about you?



RICHMOND BUGGY AND WAGON CO., 1433 E. Main Street, Richmond, Va.

W. G. ADAMS Sales Manager.

Established by
GEO. WATT, 1840.

THE CALL-WATT CO.,

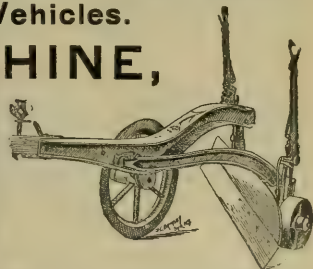
MANFRED CALL,
Gen'l. Manager.

Implements, Machinery and Vehicles.

THE UNIT ROAD MACHINE,

So called because it has but **ONE WHEEL**, and takes but **ONE TEAM** and **ONE MAN** to operate it. It has passed through the experimental stage, and stands well tested and perfected. By actual test it has been demonstrated that with one team and four men it will build more and better road than can be done by 40 men with the usual tools. That it saves labor enough to pay for itself every two days it is in use. That it is economy for each township to have one, not only to build its roads, but to keep them in order after they are built. It will do as good work as the heavy, expensive road machines, at very much less expense, and has advantages over any of them. The price is so low every road district and even individuals can afford one.

FOR FARM WORK it is especially desirable, and has no equal, for the inexpensive and practical building of roads and keeping them in order, cutting down ditch banks, opening drains, leveling, and for many other purposes. In time and labor saved it will soon pay for itself, to say nothing of its great convenience.



BRISTON.

CENTREVILLE MD.
THE CALL-WATT CO., Richmond, Va.:

Gentlemen: The **UNIT** machine purchased of you came a little late for running out leads in my wheat fields, yet I have given it a fair trial at that work; also cutting down and pulling off ditch banks, and find it just the thing for these purposes, saving time, team and labor. It is useful in other ways about the farm, such as pulling in roads and leveling low places in fields which would take twice the time and labor with the common scoop.

I am so well pleased with it that if I could not get another I would not sell at double what it cost me.

Yours respectfully,

SUMMERFIELD TILGHMAN.

Nov 9, 1904.

All interested in **GOOD ROADS** are requested to write for descriptive circulars of the **UNIT** and other road building tools.

BALING PRESSES for Hay, Cotton, Straw, etc. **WHEAT DRILLS**, **CANE MILLS**, **DISC HARROWS**, **ROLLERS**, **MANURE SPREADERS**, **PEA HULLERS**, **FARM WAGONS**, **ENGINES**, **SAW MILLS**, **CORN MILLS**, **CORN SHELLERS**, **WHEAT FANS**, **PLOWS** and **PLOW CASTINGS**.

We solicit enquiries for anything desired. **13 S. 15th Street, Bet. Main and Cary RICHMOND, VA.**

Patent Process Fertilizer Lime

Write for booklet with up-to-date testimonials.

MANUFACTURED ONLY BY

Rockbridge Lime and Stone Co.,

LEXINGTON, - - - VIRGINIA.

A RELIGIOUS MEASURE.

Dr. J. Everist Cathell, a clergyman of Des Moines, Iowa, was spending a few days in Montreal while off on a holiday. He visited the different churches, and in one of them noticed an odd arrangement of the prayer desks. Wishing to understand the reasons, he looked around for the sexton. No one was about except a workman in the rear of the church. Approaching him, Dr. Cathell said:

"My man, I am an American clergyman, and have found much of interest in these Canadian churches. But there is something here that I do not understand. Can you tell me if this is 'High Church' or not?"

The workman considered the question seriously for a moment, and then replied:

"I never heard that question asked before, sir; but I believe it is thirty-five feet to the ridge-pole."—Lippincott's.

"I read in the paper the other day," said "Tom" Dunn, "where a German over in Hoboken left \$25 in his will to treat his friends after his funeral. Of course, the Germans never did anything that the Irish could not equal, and so that story reminded me of another of a Hibernian friend of mine. The doctor told him he had only a few hours to live. He called me over, and says lie:

"Tom, I want you to take \$10 of me money that's in me wallet and treat me pall-bearers.

"It was a touching moment. Struggling with my emotions, I said to him: 'I'll do it, Billy. But shall I treat 'em going out or coming back?'"

"Treat 'em going out," says Billy, a sport to the last. 'I won't be with you coming back.'"

BENEFICENT OMISSION.

"Papa, what is Congress?"

"Congress, my son, is an institution to which we are profoundly grateful for what it doesn't do to us."—January Woman's Home Companion.

Mention THE SOUTHERN PLANTER in writing.

"Paints that Stay Painted."

PAINT is what you need^d. Do you know that
PAINT will preserve and improve your property?
PAINT will give your property a prosperous appearance.
PAINT will increase the value of your farm. We have
PAINT on hand for everything—
PAINT for roofs and barns. **LYTHITE COLD WATER**
PAINT Carriage and wagon **PAINT**. Our "Standard" house
PAINT is ready-mixed, and for the money no
PAINT can surpass it. Write us for
PAINT prices and color cards.

JOHN W. ATKINSON & CO.,
 Richmond, Va.

Spring Flexible Disc Harrow

Only Harrow in the world with independent adjustable spring pressure upon inner ends of disc gangs. Any amount of pressure thrown on these inner ends by foot. Ball-bearing. Works uneven ground. All sizes, at proportionate prices.



Seasonable Implements of the latest style, always up-to-date. Possibly you are now or will soon need a Corn Sheller, Feed Cutter, Disc Plow. You can get our Catalogue for the asking.

OUR PRICES MUST BE RIGHT.

NORFOLK FARM SUPPLY CO.

41-51 Union Street, NORFOLK, VA.

LEE'S ==PREPARED== LIME

AGRICULTURAL

For COTTON When used on land with a fair amount of vegetation or with COMPOST [which is better] the crops are as good as from any Fertilizer. It prevents RUST and SHEDDING, and keeps the plants green much longer in dry weather

PEANUTS With the same conditions as above, it is a COMPLETE FERTILIZER for this CROP. Our customers say it is equal to the BEST FERTILIZERS ON THE MARKET.

DARK HEAVY TOBACCO Haul out your farm pen scrapings, plow under and broadcast 500 to 600 lbs. per acre [the earlier the better], and you will get a heavy crop of tobacco and a fine crop of Wheat and Clover or other grass, and by proper rotation will have a

rich lot for any crop.

BRIGHT TOBACCO Our customers say that 200 lbs. per acre in the drill with other Fertilizer will prevent the tobacco from FIRING and giving it a GOOD BODY and increase its value \$2.0 per acre. For Wheat, Oats, Clover and other grass it is exceptionally good.

LEE'S EXCELSIOR TOBACCO FERTILIZER,
Specially adapted to dark shipping tobacco.

LEE'S HIGH-GRADE BONE and POTASH,
special for Corn, Sweet Potatoes, all kinds of vegetables.

Lee's Special Corn Fertilizer for land devoid of vegetation, equal to any on the market.

PLAIN SHELL LIME
Constantly on Hand.

No. 1 BUILDING LIME, In car load lots direct from Kiln, LOWEST MARKET PRICE. →

✂ ✂ WRITE FOR CIRCULARS. ✂ ✂

A. S. LEE & SON, Richmond, Va.

The "QUICK-ACTION" ALL-POWERFUL HAY PRESS

We guarantee, that no where else can be bought as strong and efficient a press for the price we furnish this press.

Not to be confounded with the make shift horse presses of to-day.



Operated by one horse, full circle.

Weight, 1,400 pounds.

Furnished with hopper open on either side or end.

Use two wires, No. 14, 9 feet long.

Capacity, 5 to 7 tons per day, ten hours.

Size of bale, 15 x 17 inches, usual length.

Weight of bale, 75 to 110 pounds.

Length of stroke, 19 inches.

It's peculiar construction gives to the lever increased power as the compression increases so that the horses are not strained at any one point. Can be operated on an 18 foot barn floor. The illustration does not do the press justice; you must see it to understand, and you must know the price to be astounded.

Ashton Starke Implement House,

RICHMOND, - - - - - VIRGINIA.

The Quick Action Matchless Hay Press.

Mr. ASHTON STARKE,
RICHMOND, VA.:

Dear Sir,—The Hay Press I bought of you does fine work. Can bale 1,000 lbs. an hour easily. I am much pleased with it.

CHARLIE HOPE, VA., Nov. 19, 1904.

Yours truly,

REPS JONES.

CLUBBING LIST.

In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

DAILIES.

With

Alone. S. P.

Times-Dispatch, Richmond, Va.	\$5 00	\$5 00
Times-Dispatch (without Sunday)	3 00	3 00
News-Leader, Richmond, Va.	3 00	3 00
The Post, Washington, D. C.	6 00	6 00
The Sun, Baltimore, Md.	3 00	3 40

THRICE A WEEK.

The World, New York	1 00	1 25
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WEEKLIES.

Times-Dispatch, Richmond, Va.	1 00	1 25
Central Presbyterian, Richmond, Va.	2 00	2 25
Religious Herald, Richmond, Va.	2 00	2 25
Southern Churchman, Richmond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	2 00	1 75
Country Gentleman	1 50	1 75
Hoard's Dairyman	1 00	1 30
Horseman	3 00	3 00

SEMI-MONTHLY.

Kimball's Dairy Farmer.	1 00	75
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MONTHLIES.

The Century	4 00	4 25
St. Nicholas	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's	3 00	3 25
Rural Leslie's	1 00	1 35
Cosmopolitan	1 00	1 35
Everybody's	1 00	1 35
Munsey	1 00	1 35
Strand	1 25	1 65
Madame	1 00	1 00
Argosy	1 00	1 35
Review of Reviews	2 50	2 75
Field and Stream	1 50	1 50
Poultry Success	1 00	75
Rural Mechanics	1 00	55
Blooded Stock	50	60
Successful Farming	1 00	60
Southern Fruit Grower	50	85
Wool Markets and Sheep	50	75
Commercial Poultry	50	75

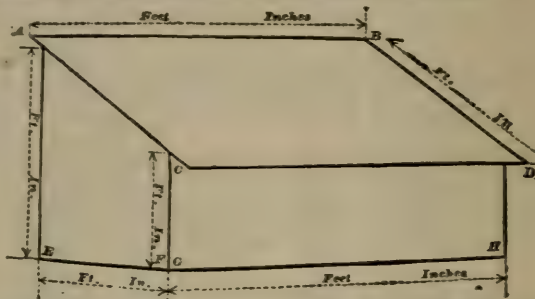
When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with Southern Planter."

We cannot under any circumstances furnish sample copies of other publications.

We will cheerfully quote our best price on any list of publications submitted to us.

ROOFING OF ALL KINDS.

Painted Corrugated Roofing, Painted V. Crimp Roofing, Roofing Tin in boxes or rolls, Tarred Roofing Felt, Perfected Granite Roofing.



Send us the DIMENSIONS OF YOUR ROOF, stating KIND OF ROOFING wanted, and we will quote you on sufficient quantity to cover it.

You can ADD YEARS to the life of your roof by painting it with our

Magnet Red Roofing Paint.

1 gallon will cover 2½ squares. Can furnish in any size package, 1 gallon up. Only the very HIGHEST GRADE material enters into the manufacture of this paint. Write for prices.

We also carry a complete stock of Conductor Pipe and Gutter, Solders and Metals; Galvanized and Black Sheet Iron, etc.

Southern Railway Supply Company,

1323 East Main Street,

RICHMOND, VIRGINIA

The Chesapeake & Ohio Railway

Extending from Cincinnati and Louisville, and

THROUGH ITS CONNECTIONS....

THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;

THE OHIO CENTRAL LINES, from Toledo and Columbus;

THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest ROUTE

TO STAUNTON, LYNCHBURG, CHARLOTTESVILLE, RICHMOND, PETER BURG, NORFOLK, And Principal Virginia Points.

H. W. FULLER, Gen. Pass. Agt. C. & O. Ry., Washington, D. C.

The Southern Planter.

DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,
TRUCKING, LIVE STOCK AND THE FIRESIDE.

Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

66th Year.

Richmond, Va., February, 1905.

No. 2

Farm Management.

WORK FOR THE MONTH.

The opening month of the year has been, on the whole, up to this writing a normal one. We have had a continuance of fairly cold weather, but no excessive frost, and but little more snow, and this has now all gone. As yet we have had no continuous rain, but one or two good showers which have somewhat helped to replenish the water supplies. There is still, however, a great lack of moisture in the land, which, for the sake of the crops of the year it is to be hoped will shortly be made good. In the South we cannot afford to go into the crop year with a lack of soil moisture. Our warm weather usually starts in so early that, unless we have a good reserve of moisture in the land, crops are bound to suffer during the period of growth. In the process of working and fitting the land much moisture is unavoidably lost out of the soil, and especially is this the case when precautions are not taken to conserve the same by keeping the surface mulched with loose soil. We would strongly urge that the work of plowing and breaking the land be pressed forward at every available opportunity, so that such rain as falls may be absorbed into the land, and not be allowed to run off into the streams and river. With a lack of normal rainfall for many months past the reserve in the soil is far below normal, and everything possible should be done to economize that which may fall. Even should there be a period of excessive rainfall the plowed land will permit this to sink deep into the soil, where there is plenty of room for it, and where any excess can easily get out of the way. Especially will this be so where,

in addition to plowing, the subsoil is also broken with a subsoil plow or cultivator. We urge that this should be done wherever possible. The soil cannot be made loose and open to too great a depth for the best interests of the crops, and especially is this so with the corn crop, the roots of which will go three or four feet down into the soil if the opportunity is given. A crop rooted thus deeply into the soil will never suffer from drouth unless very protracted and severe. Wherever it can be done lime should be applied on the land as soon as plowed at the rate of 25 to 50 bushels to the acre, say up to the end of March. It will not be worth while to apply lime later than this time, so far as the crop of this year is concerned, as it is doubtful whether the benefit it will confer will be felt until too late in the season. Of course even if applied later than this it will confer a permanent benefit on the land to be appreciated in later crops. In this issue will be found an article which illustrates the improvement effected by the use of lime in Henry county, Va. We have received communications from nearly all parts of this and the adjoining Southern States reporting favorable results from the use of lime, and thus confirming the opinion we have so frequently expressed that nearly all land in the South needs lime to make it responsive to good cultivation and fertilization. It is the prime agent needed to make land fit for the spread of microbic life therein, and upon this microbic life more than upon the quantity of fertilizer or manure applied depends the crop yield of the land. Unless the soil be slightly alkaline the microbes cannot mul-

tively and exert their beneficial influence in making available the inert plant food to be found in every soil. They loosen the soil and render it permeable by the moisture and air, and both these are essential to plant growth, as only through the action of these and the microbes can the plant food in the soil be rendered soluble and capable of nourishing the crops. Whilst the beneficial effects of microbe life in the soil have only as yet been definitely and positively ascertained in connection with the leguminous crops, it is reasonably certain that the same action is at work in some form or other in connection with all other crops. Though the definite microbe which works on the corn crop has not yet been isolated and determined, it is and has been for some years certain that the corn crop takes some part of the nitrogen required for its growth from the atmosphere, and this it is certain it can only do through microbic action in some form. It is, therefore, as essential for the success of the corn crop that the soil should be filled with microbic life as it is for the success of a leguminous crop. Hence the importance of using lime on land to be planted in corn. Mr. T. O. Sandy, whose farm we wrote about in the last issue has found lime to be one of the most valuable factors in securing the great yields of corn which he is making yearly on his farm, and never fails to use it liberally in preparing the land for this crop. Set the lime out in small lumps of about half a bushel each on the land as soon as plowed. Slake each lump with half a bucket of water and spread broadcast at once with a shovel and then run a harrow over the field to mix the lime slightly with the soil, and thus prevent it baking on the surface.

The area of land to be planted and the location of each crop should now be definitely fixed and preparation be made for making these areas ready for planting in the order in which they should be planted. Orders should at once be given for the fertilizer needed to be used, so that it may be on hand when required, and time not be lost waiting for its delivery. In connection with this subject of fertilizers, we want to urge upon each farmer the importance of not buying fertilizer simply by the name, but of studying the requirements of his land and of the particular crop to be grown, and of meeting these by buying only the ingredients needed and not some fertilizer having a high sounding name, but in all probability only containing the minimum quantity of the actual ingredient needed. Thousands of dollars, yea, probably hundreds of thousands of dollars, are thrown

away every year in the South in buying fertilizer with an analysis of 8-2-2, when a plain acid phosphate, with an analysis of 12 to 14 per cent. of phosphoric acid would have met all the requirement of the land. We have never been able to see what possible benefit any crop can be supposed to derive from a fertilizer containing only 2 per cent. of nitrogen and 2 per cent. of potash. Let any farmer weigh out 40 pounds of any fertilizer and look at it, and then at an acre of land, and try to imagine how any plant in that acre can get any benefit from the infinitesimal small quantity of the fertilizer which even the application of a ton to the acre of a fertilizer with an analysis of 8-2-2 could supply, and then let him try to imagine what an application of 200 pounds to the acre—a very common application—means, *4 pounds of nitrogen and 4 pounds of potash to the acre.* The crop that can flourish with this can surely flourish without it. Except for such crops as Irish potatoes or tobacco, we believe that what all land in the South mostly needs is phosphoric acid and nitrogen. The phosphoric acid should be supplied by making the inert phosphoric acid always present in all soils available by fine and deep breaking of the soil and repeated cultivation, and the use of lime, and then supplement this by 300 to 500 pounds to the acre of 12 to 14 per cent. acid phosphate. The nitrogen needed should be got from the atmosphere by the growth of leguminous crops. These get it much more cheaply than it can be bought from the fertilizer dealer. Where these crops have not been grown or where more nitrogen is needed it can be best supplied in the South by cotton seed meal, where only a slow action is required, and by nitrate of soda where quick action is needed. In using these ingredients instead of the mixed fertilizer a man knows what he is applying and the degree of availability of the form used. Wherever possible, let crops of corn, cotton and tobacco follow crops of clover or cow peas turned down. These will enable nitrogenous fertilizers to be dispensed with, and thus cut off the heaviest item in the fertilizer bill. Use barnyard manure to the greatest possible extent. In order to get benefit from this form of fertilization it is not necessary that the application should be a heavy one, though if there be plenty of the material available it will never hurt to use it. From even a light covering of farm-yard manure much benefit is derived. It largely promotes the growth of microbic life in the soil, and thus helps the crops more than the actual amount of plant food in the manure would indicate its ability to do.

When using commercial fertilizer or the chemical ingredients it will pay better to use liberally on a small area than sparingly on a large one. An application of 200 pounds to the acre of an 8-2-2 fertilizer only gives to the crop 24 pounds of actual plant food. This spread over an acre of land means but the smallest modicum for each plant, even if evenly spread over every foot of the surface, but as usually applied means only a little quantity to a plant here and there. Is there any wonder that crop yields are small with such fertilization, even when it happens to be just what the particular land and crop calls for. We would like to see farmers availing themselves of some of the old-fashioned Peruvian guano, which can once again be had. It will be found advertised in our columns. Thirty or forty years ago it was the only fertilizer used, and gave splendid returns. It is a naturally mixed fertilizer, being the excreta of the millions of birds and the dead birds themselves found on rainless islands off the coast of South America. For years it has been almost impossible to get Peruvian guano in this country, as the supply was limited and Europe took the whole of it. Recently new deposits have been found, and now it is being regularly imported into this country, cargoes being discharged at nearly all Southern ports as well as North. A recent analysis of one of these cargoes gave the following results:

20.00 per cent. lime.

3.60 per cent. ammonia.

4.25 per cent. potash (actual).

50.00 bone phosphate (23 per cent. available phosphoric acid).

14.25 per cent. organic matter.

92.10 pounds in all in every hundred, of food of value to the crop. A fertilizer with such an analysis as this is bound to tell when used. We used it more than thirty years ago with wonderful results, and this also is the testimony of numerous old tobacco planters with whom we have talked.

It is too early yet to sow any crop except Canada peas and oats for a forage or grazing crop, and oats. These may be got in all through the Eastern and Middle sections of this and the adjoining States as soon as the land can be got into good order. The sooner Canada peas and oats are put into the ground the better. This is essentially a cool climate crop, and to be successful in the South wants to complete its growth by May. Where it succeeds it makes a valuable early grazing crop the earliest we can raise

spring sown, and makes also excellent hay. In comparative tests of crops of oats and peas, oats alone, barley and oats and barley, the average yields were nearly 12, 8, 7 and 6 tons per acre, respectively. The estimated value of the food constituents per acre calculated on the dry matter is given as \$63.11 for oats and peas, \$57.99 for oats alone, \$43.39 for oats and barley, and \$31.99 for barley alone. We have known excellent crops of Canada peas and oats to be grown in eastern and middle Virginia, and the crop is one well suited to the higher altitudes of this and adjoining States, where it should be sown in March and April, according to the altitude and climate. Sow the peas first alone at the rate of one and a half to two bushels to the acre. They should be put down deep with the drill or be plowed down and given a cover of four or five inches. Then sow the oats broadcast at the rate of three-fourths of a bushel per acre and harrow in. If the land is not rich, apply 400 pounds of acid phosphate to the acre broadcast and harrow in with the oats.

If oats are sown in February the Virginia Gray winter oat may be seeded, but later than this month either the Rust proof or the Burt Ninety-Day oat, of which we hear good reports, should be seeded. We have never been advocates for the sowing of spring oats in the South, and the force of our reasoning against them is seen in the gradual decrease of the area seeded. Last year the area was much less than in previous years. Oats are a cold climate crop, and in the South should be seeded in the fall when with a favorable winter they will make a profitable crop on good land. The yield of spring oats is always very problematical, and rarely profitable. Their main use is to be cut for hay when in the dough state. Too frequently they are seeded on the poorest land and given no help in the shape of manure or fertilizer, hence their very frequent failure. If it is worth while to sow them at all it is worth while to give them some help. At least 300 or 400 pounds of acid phosphate should be given to the land when being prepared and a top dressing of 100 pounds of nitrate of soda be given when the crop begins to grow freely.

Grass and clover crops not seeded in the fall, which is the proper time all through the South, may be sown in this month and March as soon as the land can be got into good order. Sow the grass and clover alone, and not with a grain crop. The secret of success in grass growing is perfect preparation of

the soil before seeding and the making of the land rich. Lime also is of great help in securing a stand, especially of clover. It is not wise to attempt to grow a hay crop on poor, badly prepared land. Plow deeply and harrow and roll, reharrow and roll until a fine seed bed is prepared. Make the land rich by the application of barnyard manure and bone meal, or a mixture of bone meal and acid phosphate, and where potash is lacking in the land, wood ashes or muriate of potash. We prefer the ashes, as they also supply lime in an available form. After the grass has commenced to grow give a top dressing of 75 to 100 pounds of nitrate of soda per acre. The hay crop is gradually becoming a large factor in Southern agriculture, each year increasing in area and giving heavier returns. Last year it made in Virginia and North Carolina an average of nearly one and a half tons to the acre, and is always a salable crop at from \$12 to \$15 per ton. Virginia alone made nearly 650,000 tons. When the South becomes a grass and hay country then we shall see farmers prosperous and land constantly improving in value. No grass country is ever found lacking in prosperity. We have numerous enquiries as to how to make a grass pasture which can be grazed the first year. This is practically an impossibility, with due regard to the permanence of the pasture. Grass seeds ought never to be grazed the first year, as they do not get a sufficient hold on the land in that time to bear pulling and biting without very much of the grass being pulled up by the roots and thus causing a thin sod. Mow once the first year in the late summer and keep stock off the land until the following spring, top dressing the field with manure if possible, and then rake off the loose straw and trash in the spring, and roll, and the pasture will then be likely to make a good, permanent one. In seeding for hay be careful to seed only varieties of grass that mature at the same time. Orchard grass, tall meadow oat grass and herds grass make a good mixture. Some like also to seed some timothy with these grasses, but this is later in maturing, and in our opinion ought to be sown alone. Seed heavily, not less than two bushels of seed per acre. We have often sown 3 bushels. Thin seedings are very apt to be taken by the weeds, and thus the whole labor be lost. When seeding for a pasture mix other grasses with those above mentioned, such as Virginia blue grass, Kentucky blue (on limestone lands), meadow fescue and perennial rye. These mature at different seasons, and thus keep the pasture always producing grazing through the year. With these mixtures, whether for

hay or pasture, always sow some clover. Red, Sapping and Alsike, say five or six pounds to the acre. This will help the yield the first year, and later on the decaying roots afford help to the grass.

Get all barnyard manure on to the land intended for corn as it is made. It is better leaching on the land than in the yard and pens. In the one place the leachings are valuable, in the other they are wasted. Farmyard manure never pays better on any crop than on corn.

Make out your orders for seeds and fertilizers needed and send them to the dealers and merchants at once, so that you may not have to wait for these when ready to use them.

Have the tobacco plant beds burnt at once, and apply a fertilizer with a good percentage of ammonia to encourage growth, and then seed and cover with muslin.

PLOWING.

A gentleman in Northern Virginia, who desires us not to use his name, writes us complaining that our article in the last issue on plowing is not sufficiently practical in that it does not emphasize and explain the advantages of deep plowing. We are sorry to know that he does not think we sufficiently appreciate the value of deep plowing. Surely he cannot have read the numerous articles we have written on this subject, in which we have laid the very strongest emphasis on the value of deepening the soil by gradually breaking loose the subsoil and mixing it with the surface soil. We have always advised that this should be a gradual process, so that time should be given for the new subsoil to become gradually aerated and thus rendered capable of giving up its store of plant food to the crop. We have had too many complaints from farmers who have plowed deeply all at once and suffered loss of crop for the first year or two to advise very deep plowing all at one time. The advantages conferred by deep plowing are that it permits of the roots penetrating the subsoil easily and thus securing a wider feeding area, whilst at the same time it affords storage room for water, on which the success of all crops largely depend in a dry time, and good drainage in a wet one. Supersaturation of the soil with water is as fatal to success in crop production as is a lack of such saturation as will give to the crop a constant supply of

moisture sufficient to dissolve the food elements in the soil as the feeding and growth of the crop depends wholly upon the amount of dissolved plant food available. Plants take up and assimilate food only in a dissolved form. Hence the importance of deep plowing to hold the necessary water within reach of the crop. Our correspondent says that he plows 10 to 13 inches deep with three mules, and the result of such plowing for the past thirty years has been to make a farm which was incapable of supporting a man in the beginning, now produce fair crops without the use of any commercial fertilizer. He complains, however, that he cannot get a plow that will completely invert a furrow 10 inches in depth, and asks that we urge plow makers to give attention to this point. We know that there is much truth in what our correspondent says, but there is also much to be said on the other side of the question. Our own practical work in the field has led us to the conclusion that it is much to be doubted whether the complete inversion of the furrow is at any time desirable. We would prefer always to lay it at an angle of 45 degrees on the preceding furrow, thus ensuring that the surface soil and the new soil shall become incorporated together in the process of working the land with the harrow. Soil thus mixed is much more certain to produce a crop every year than absolutely new soil from the bottom of the furrow. It is, of course, possible to make a plow that will completely invert the furrow, and this object is better secured in the English plow, with its long, gradually sloping mould board than is done by the ordinary American plow, with its shorter and more abruptly sloping mould board. A plow, however, made like the English one does less of the work of pulverizing the soil than the American one, and this necessitates more continued harrowing of the soil after the plow to fit it for planting. Some of the highest agricultural authorities maintain, and in our opinion with much reason, that this breaking and pulverizing of the soil with the plow in the process of plowing is of infinitely more service in fitting the land for the crop than is the laying of the furrow completely inverted. Our own practice conformed to this opinion, and we are inclined still to regard it as on the whole the best. The great points to be emphasized are, plow *all the land*, gradually increase the depth of the soil and mix the top and subsoil thoroughly, and then make the whole depth of the soil as fine as possible. In this condition it will give up to the crop the plant food contained in it, and the roots can readily run in all directions and forage for this food.

THE CORN CROP OF THE SOUTH IN 1904.

We regret to say that very few of our readers have responded to our request in the last issue for particulars of yields of corn made last year. We have one report made by Mr. Wm. Gilmore, of Chase City, Va., who says that he had 16 acres in corn planted in rows four and one-half feet apart and fourteen to sixteen inches in the drill. The land was lightly covered with cow stable manure put on as taken from the stable, and 400 pounds of commercial fertilizer was applied to the acre. On the 16 acres 1,220 bushels of corn were made, an average yield of $76\frac{1}{2}$ bushels to the acre, and this in the so-called poor southside country of Virginia. There is nothing the matter with this southside country as is evidenced by this yield, and the crops made by Mr. Sandy, reported in our last issue, except bad farming. Give the land its due, keep stock and make manure, grow peas and plow deep and cultivate well and as good crops can be made in southside Virginia as in any State in the country. Mr. Gilmore also reports that from a seeding of 36 bushels of wheat he made 820 bushels, so it is evident the land will grow wheat when properly prepared and manured. Mr. B. A. Sprinkle, of Forsyth county, N. C., reports that he made 480 bushels of corn on seven acres of land in that county without any commercial fertilizer, and this on land that has been in corn for at least ten years in succession. On one acre, to which a top dressing of farmyard manure was applied and plowed under in the spring just before the corn was planted and which was well prepared by plowing, rolling and harrowing, and with the rows four feet apart, listed with a shovel plow and with 200 pounds of Baugh's bone and potash applied on each side of the list, he made 88 bushels and a half. This shows that North Carolina lands can make a good yield with proper preparation. Let us hear from others with their yields and methods of preparation and cultivation.

ALFALFA GROWING IN MARYLAND.

Editor Southern Planters

In hope of persuading many others to try alfalfa raising, which gives so good a crop and yet enriches the soil, I write you now that for three years I have been meeting in alfalfa raising on "Blakeford" with success, *but without using any lime or any inoculation.*

The four acres utilized are composed of rich clay loam, which had been very heavily reinforced, 13 and 14 years ago with good barnyard manure, spread on

a timothy and native green grass sod. Then came a wheat crop yielding 196 bushels within the four-acre enclosure, then a purple clover crop, then a volunteer native green grass sod used for pasturing and unfertilized until five years ago, when, after being manured, it yielded a heavy crop of millet. This was followed by a fair purple clover crop and then by my first alfalfa crop, planted in the fall and treated to about 200 pounds to the acre of a fertilizer, running, say, 1,500 pounds of dissolved South Carolina rock, 350 pounds of kainit and 150 pounds of muriate of potash per ton. I foolishly harvested three crops of alfalfa the next year and then three crops the second year, getting about four tons of dried hay to the acre. I say that foolishly I harvested three crops the first year, for by not cutting the first crop and the weeds in it early for a mulch, I permitted weed seed to form, fall, sprout and grow and to so spoil my stand of alfalfa that I decided I had better replant. This I did last September a year. This year I harvested from three cuttings about six tons of dried alfalfa hay per acre.

But it seems to me that all who desire to grow alfalfa or any other legume can improve on my plan by getting from the United State Agricultural Department in Washington some of the "nitragin" written about by Dr. Gilbert H. Grosvenor in the Century Magazine for October, under the caption "Inoculating the Ground," and follow the instructions given by the Department with inoculating bacteria.

DeCOURCY W. THOM.

"Blakeford," Md.

In our last issue Prof. Robinson, of the Department of Agriculture, who has been closely associated with Dr. Moore, the gentleman to whom the whole world is indebted for perfecting the method of bacterial inoculation of soil for the production of leguminous crops, wrote a most interesting and instructive article on the subject, which we commend to the attention of our readers. Whilst it is possible to produce most of the leguminous crops without inoculation, yet the process is usually a slow and uncertain one, as the first two or three crops are almost invariably weakly in growth and soon die out from the absence of sufficient of the bacteria in the soil to thoroughly infect the crop. If sowings of the crop are persisted in the bacteria is gradually introduced, as nearly all the legumes carry some of the bacterial spores on the seed, and eventually the soil becomes fully inoculated. Mr. DeCourcy Thom's land evidently had the alfalfa bacteria in the soil, probably introduced at some time by plants of other legumes upon which the bacteria had existed. It is known that Burr clover and the sweet Mellilotus carry a bac-

teria which is so similar to that of the alfalfa as to be effectual in inoculating the soil, so that it will produce alfalfa. As both these plants are to be found growing wild over considerable areas of the Southern States, it is probable that through one or the other of them Mr. Thom's land was inoculated. Whilst also lime is in most cases needed to ensure a vigorous growth of alfalfa, this only arises from the fact that the bacteria will not persist and exercise its beneficial effects in an acid soil. If the soil be not acid, then lime is not essential. In Maryland much lime has at one time or another been applied to much of the land, and as lime is long continued in its effect in keeping the soil alkaline, it is quite probable that Mr. Thom's land was already sufficiently alkaline to meet the needs of the bacteria, and hence his success. By the use of the bacteria produced and provided by the Department of Agriculture, and some lime any of the leguminous crops can be certainly grown on land of sufficient fertility when properly prepared by plowing and cultivation.—Ed

BURR CLOVER AND BERMUDA, ELEVEN MONTHS OF PASTURE.

Editor Southern Planter:

It is my pleasure to relate certain facts that have come under my observation during the last two years that do not seem to be generally known, or, at least, have received little consideration by southern farmers.

I first called attention to the combination of Burr clover and Bermuda in the South some twelve months ago. From time to time, I have read much concerning the value of these grasses used separately, but continue to notice that the use of them jointly has not been discussed.

Bermuda is an old stand-by of certain sections of the South, where a rather strong soil consisting of clay and sand prevails. It has been found that Bermuda revels in the hot sunshine of the South, and the hotter it gets, the better it grows. It is a persistent grass that spreads by under ground stems, or rootstocks, and can be readily transplanted by planting these rootstocks in shallow furrows about two feet apart. The more these rootstocks are cut to pieces, the better the grass spreads, thus making it very hard to kill when it gets a strong hold. So hard is it to kill, that I do not advise planting it except for permanent pasture. Its fitness for making permanent pasture is the one thing that commends it so highly. The one thing we need in the South, is more permanent pasture, and the farmer that would deliberately plough up a square foot of permanent pasture on his

farm, if it is good pasture, is a fit subject for the asylum. Permanent pasture is our great need. These naked fields of the South are like starvation staring us in the face. Bermuda is a valuable grass as permanent pasture, if you get on to its ways. I confess that it behaves in the most perplexing manner at times. It is enough "to make a sailor preach." If you do not want it to get a start, it will do it in spite of you, and if you try to get it started, it persistently fails. Possibly we do not study the conditions closely enough. In the first place, it must have sunshine. In the second place, the land must be kept up. A Bermuda pasture that is pastured regularly is maintained with little difficulty for years, but when Bermuda grass is cut for hay continuously for several years without addition of plant food of some kind, it will degenerate quite rapidly. I am confident that any Bermuda pasture can be top dressed with profit every year, even if it is pastured, and, for this matter, I feel sure that it pays to top dress any form of permanent pasture.

There have been some strong objections to Bermuda as a pasture grass. I pass by all others to mention at this time the most important. After the first severe frost in November, Bermuda is blighted, and is worthless for pasture, until very late in the spring, in most parts of the South, until the 1st of May. It is one of the very slowest grasses to come forward in the spring. This at once becomes the standing objection to it as a permanent pasture. During the very months when we need pasture most, Bermuda is worthless.

Two years ago I made my acquaintance with Burr clover in Wilkes county, Ga. I was attracted to it first by its healthy growth, and next I was pulling bunches of it up to examine the roots. I found them clustered with nodules. I said to the gentleman who was showing me over his farm, that he had a treasure in this clover, and asked him if it had improved his farm much. He said, "wonderfully." He told me that when he wished to reclaim an old field, he put it in Burr clover. He then told me of its peculiar habits.

It is an annual, like Crimson clover, but unlike this fine clover seeds itself perfectly. Once you get a stand of it and you never have to worry about its return the next year provided, of course, the land is strong enough for it. It was interesting to learn that, like crimson clover, it could in one or two years render the land fertile enough for its own propagation. You possibly know that at times crimson clover is almost a failure the first year, but if the field is reseeded, it will come right along the next season. This Burr clover is remarkable in another respect. It seems to germinate in cold weather, or possibly late in the fall. At any rate, the fields are green with

it in December, unless the freezes are very continuous. It grows on through the spring months and seeds about April and May, dying away completely in a few weeks after seeding, so that the fields are actually stripped of it. It grows right along with Bermuda grass enriching the soil for the Bermuda and for itself during those months when the Bermuda is lying dormant, and at the same time, furnishing luscious pasturage for stock at a time when southern fields are brown and bare. Even before it has seeded, the Bermuda is coming on, and the stock is grazing Bermuda before the Burr clover is gone. When I saw this with my own eyes, and realizing that in those sections of Virginia, where the thermometer does not go below 10 degrees, and where the soil suits the growth of Bermuda, and especially in North Carolina, South Carolina, Georgia and Mississippi, this furnished a combination that will give fresh pasture through eleven months of the year, I felt like telling it to every one.

I have been often asked if Burr clover could be used for hay, and if it was relished by stock. I am inclined to think that it would not be valuable as a hay crop. It is more like white clover, though a little growthier. Cows, sheep and hogs seems to be very fond of it. Horses will not eat it very well. Cows must be trained to it, I am told. Hogs just revel in it, as in all clovers. Burr clover is transplanted by raking up the dried-up heads and bunches and spreading these over the field, using a light harrow to work in the seed. It is very easy to seed.

Not least interesting is the fact, that the bacteria that produce the nodules on Burr clover are suitable for inoculating alfalfa land. It occurred to me to make a test of this, so two years ago, I inoculated a small plot of land and seeded it with alfalfa. The results were excellent. I am sure that land in Georgia that is well limed, supplied with phosphoric acid and inoculated with Burr clover will grow alfalfa with little difficulty. I have a sample of alfalfa to show any of my friends who come my way. I have noticed that Prof. Massey and Prof. Kilgore, of North Carolina, have quite recently urged the importance of burr clover for inoculating alfalfa land, thus confirming my statements.

I should like to get a discussion of this rotation in the Southern Planter, and, especially, would I like to know more of Burr clover. What is its range in the South? Can it be made a successful pasture in connection with the dairy? How many years does it require to secure a strong stand in different sections? what conditions have been found to be adverse?

H. B. ARBUCKLE.

Decatur, Ga.

Answering advertisers, mention THE PLANTER.

UTILIZING SORGHUM FOR HAY AND FODDER.

Editor Southern Planter:

Of all the problems that confront the southern farmer, one of the most serious is, how to secure an adequate supply of hay at a moderate cost. In many sections where red clover and timothy flourish and blue grass is indigenous to the soil this question is of minor concern, but after all the area where tame grasses flourish is quite small so that the hay question is one of widespread interest and general concern. The amount of hay produced in a given territory measures its stock carrying capacity, and hence determines to a large degree the character of crops that may be grown successfully. It also determines whether a rotation of crops is possible, and to what extent soil fertility may be conserved.

Is it any wonder, under these conditions, that the hay question should assume such massive proportions in relation to the present and future agricultural prosperity of the South.

The one great deficiency on the average Southern farm is the lack of hay for winter and summer feeding, and this statement has a general application. In almost any town or city on a market day farmers may be seen carrying from one to several bales of hay home with them, for which they have paid from \$15 to \$20 a ton. Sometimes this is timothy or mixed hay, occasionally it is clover and quite frequently shredded stover.

Why does this practice prevail? Is it because of the superior merit of timothy hay? No, for the latter is not rich in feed nutrients. A ton of timothy hay contains 1,736 pounds of dry matter, 57.8 pounds of digestible protein, 874.4 pounds of carbohydrates, and 28.6 pounds of fat. The nutritive ratio is very wide, being 1:16.2. A ton of corn stover contains 1,190 pounds of dry matter, 34 pounds of digestible protein, 648 pounds of carbohydrates, and 14 pounds of fat. From this it appears that two tons of shredded stover would equal a ton of timothy hay in feeding value. Yet the former can be produced at a low cost in larger quantity and save the enormous sums now paid out for timothy and mixed hay by Southern farmers. The explanation of the condition of affairs depicted is not hard to find. The truth and the whole truth is that the subject of hay making has been grievously neglected. Why? Because the substitutes that can be used with success to replace hay from the tame grasses are not fully appreciated. Somehow or other timothy hay has an imaginary feeding value in the mind of farmers generally speaking, which it does not possess.

As a business proposition, the importance and necessity of good hay in abundance made at a moderate cost has not been recognized. May some of the truths brought to light in this discussion be fruitful and bring forth results of value along hay making lines. Without hay, horses and mules cannot be economically fed; enough stock cannot be maintained to supply the waste from the farm; rotations, as already pointed out, must cease, and when that misfortune overtakes the farm the mortgage and impoverished fields soon follow in its wake.

Good reader, never forget that grass and hay are fundamental to the development of a rational system of cultivation. Grass and hay means soil preservation through the destruction of gullies and surface erosion. It means the deepening of the soil so that farming on the subsoil is no longer necessary, and when this result is achieved the agricultural rejuvenation of the South will be in sight. Spread the gospel of grass and hay, for it is like honey dripping from the honeycomb, swift and sure, to the soul of the farmer.

All that precedes has been said by way of digression, and, therefore, seems unpardonable. But the matter referred to is of such general and vital concern to our agriculture that the digression can hardly be called inappropriate, under the circumstances. It is not the purpose of this paper to deal with the general subject of grasses and clovers and their general adaptability to our several soils and climates, but rather to call specific attention to one plant which can be and is to a certain extent utilized with success for hay and fodder. The plant referred to is none other than common, every-day sorghum, so well and so unfavorably known to our stockmen. I use the word "unfavorably" advisedly, for if its value were more generally recognized, surely it would be utilized to a greater extent. Sorghum as hay and fodder bears a peculiar relation to the South. It is the fourth arm of Southern agriculture. As I see it, our crops run as follows: First, cotton; second, corn; third, tobacco; fourth, sorghum. However, as stock husbandry of necessity and by reason of future economic conditions, will outrank them all, sorghum should occupy a higher position than the estimate calls for. This will surely follow as our stock interests grow.

Let us now proceed to consider sorghum as a hay and forage plant in greater detail, and so become familiar with some of those qualities which recommend it for favorable consideration at the hands of the farmer. Unfortunately, sorghum has not been studied as carefully by the Southern Stations as it

should have been, and the writer has thus far failed to find an authentic analysis either of the cured hay or fodder. The only information available is an analysis of the green fodder and of silage made from it. The analysis of green fodder corn and sorghum are remarkably close, so that it is fair to infer that one has about the same feeding value as the other. Good sorghum hay or fodder should be superior to corn stover in feeding value, because of the relatively large amount of grain contained in the seed heads. Now, if sorghum hay only approximates corn stover in digestibility, which is certainly not giving it a high rating, two tons of it would equal a ton of timothy in feeding value. The yield of timothy under favorable conditions would be a ton and a half per acre. Sorghum as hay or fodder will, under conditions of soil and climate that would destroy timothy, yield from three to six tons of cured food. Instances are on record where seven to ten tons of cured hay has been harvested from an acre of ordinary red clay land not remarkable for fertility and cultivated in an indifferent manner. Thus the farmer having stock to maintain can secure with comparative ease, at least, twice as much nutriment from an acre of land in sorghum as he would obtain were the land in timothy.

As already explained, the fodder is virtually equal to corn fodder in feeding value, and yields of 15 to 20 tons for soiling purposes may be counted on. For silage, when properly handled, sorghum has no superior, and practical experience would indicate that it can be fed to beef and dairy cattle with as great success as the best corn silage. The writer has seen the sorghum fodder obtained from an acre fed with a grain ration limited to four pounds per head per day to four head of 800 pound beef cattle for more than 150 days. The cattle gained during this period 692 pounds, or 173 pounds apiece. The sorghum was eaten with great relish because of its sweetness and succulence. In this instance, it was grown in drills two feet apart, cut and bound with the corn harvester, and cured in the field in large shocks. On many a farm the few cattle and horses kept are allowed to wander at will through the bleak and barren fields seeking food when five or ten acres of the hundreds scratched over and cultivated would have provided them with the best food in abundance at a cost, when properly managed, not exceeding \$2.50 per ton. What farmer can afford to pay \$15 a ton for hay when he can grow such a magnificent substitute at home at so moderate a cost?

These facts testify to the value of sorghum when

utilized either green or dry, and show that it adds wonderfully to the stock carrying capacity of a given area of land. The hay or fodder is useful for feeding to almost every class of stock raised on the farm. When properly made and cured as hay, the stalks are fine and leafy, and being succulent, sweet and low in crude fibre, the stalks are eaten up clean as well as the leaves. In the condition described, the hay is well suited for horses and mules, and will cause them to fatten quickly. Sorghum is accused of making the coat long and rough, and there appears to be some foundation in the charge. If a small amount of bran, linseed or cow pea hay be fed with it, the difficulty will be overcome.

Sorghum is relished by sheep and calves, but being a carbo-hydrate food, it should not constitute the sole ration, as is often the case. Those who use it in this way will not find it as satisfactory as when fed with a better understanding of its limitations.

As to the best methods of feeding opinions differ. It should at least be fed where it can be kept dry after removal from the rick. A rack with slats in front would be very convenient and save what would otherwise be a great waste of food. It is doubtful if it would pay to cut the fodder, and certainly not the hay. The best results will follow when limited quantities are placed in the racks every day, so as to keep the hay bright and clean and in the most palatable condition. A handful of salt sprinkled over it will prove appetizing. There is no difficulty in getting animals to eat sorghum hay of good quality, for it should have a greenish brown color, attractive to the eye, and it is so soft and pliable, yet withal possessed of such a delightful aroma and sweet succulence as to make it a most desirable morsel to the palate of the farmyard inhabitant.

What other qualities does sorghum possess that have been overlooked? It will grow on land too poor to raise grass or hay as the term is generally understood. This does not mean that it will be proper to grow it on the same land year after year; far from it. In that case it would prove too exhausting to the soil. Placed in a rotation of three to five years, the latter term preferred, it can be relied upon to provide the necessary provender without injury to the land. The draft made by timothy on the fertilizing constituents of the land is very heavy, but the yield being comparatively small, it takes it much longer to remove a given amount of plant food from the land than a crop of sorghum. Hence timothy is not regarded as hard on the soil. The true basis of comparison, however, is found by determining the total

draft on the soil as compared with the feeding nutrients produced. On this basis, sorghum is not harder on the land than other farm crops. Thus one of the famous arguments against it is exploded. Sorghum is a hardy plant, for when dry weather comes it does not wither away and die, but bides its time, and when the rain comes it drinks deeply and yields bountifully. Not so with corn, for if the rain is withheld 72 hours at tasseling and silking time the yield may be reduced one-half.

Sorghum is well adapted for growing on old sedge fields, and on lands unsuited for its more delicate cousin, corn. Thus it enables the farmer to utilize and bring into rotation areas not in the best condition to commence with. Under these circumstances the yield may not be large, but how much better to have the barns and sheds full of attractive hay than have nothing at all. The other excellent qualities of this plant have been dwelt on at some length previously, and so need not be repeated here.

How shall sorghum be cultivated for hay? Plow the land deeply, in the fall, if possible. Subsoil it, at least, once in three years if the clay is very heavy. In the spring sow the sorghum at the rate of one and a half to two bushels per acre. An ordinary grain drill will answer, and is, in the opinion of the writer, better than broadcasting, as the seed is more evenly distributed and uniformly covered.

After the sorghum is well up, if weeds prove troublesome or should a crust form, run over the land with a weeder. It will not hurt the sorghum, but will give it a start. Do not seed too early. About two or three weeks after corn is the best time, though seeding may be done as late as July, depending on the locality.

When the heads begin to shoot, cut for hay. Good weather is essential. Use the tedder freely to turn the stalks over before raking up. Rake and cock according to judgment and haul to the barn when thoroughly cured. Little difficulty will be experienced in handling the hay if the stand is thick enough to insure fine stalks, which will dry out quickly.

Sorghum can be ricked in the field with great success, as it turns water much better than is generally supposed. In bad weather hay caps can be used to advantage for covering the small cocks as they are put up.

Sorghum may be grown as fodder in drills from two to three feet wide, and while the handling is different the fodder answers every purpose of the hay. Seed at the rate of eight to twelve pounds per acre, and most of the cultivation may be done with

the weeder, after which the two-horse corn cultivator can be used. When the seed heads are ripening cut by hand or with the corn harvester and place in large shocks securely tied, to cure, and haul late in the season to the vicinity of the barn or feeding lot. Fodder has one serious disadvantage in that it cannot be piled in mows, but must be stood on end, and thus occupies a lot of room. It is so sappy, however, that its palatability is unsurpassed, and, in fact, it combines many of the most desirable qualities of silage in the form of fodder.

Why should the Southern farmer want hay under these conditions? Why should our live stock be so often neglected during the winter season, and prove a source of loss and annoyance to the owner when they should be a source of joy and profit? Why are our farmers buying hay at \$15 a ton when they can grow sorghum in abundance on a few acres of land without ultimate injury to it? These are questions for serious consideration. They afford food for thought and reflection. Do we understand that saving and not making wealth is our greatest problem? Sorghum is not a panacea for all our ills, not by any means, but it can and ought to be a stay and comfort, a source of saving and profitable investment. It can be used in a dozen different ways to assist in the material development of stock farming, soil reclamation and the general development of our agricultural interests. The remedies for ills we suffer will not of necessity be discovered as a result of some profound, scientific investigation, but rather from a studious examination and utilization of the things which are within our reach, but which for some unknown reason have never been appreciated.

ANEREW M. SOULE.

Virginia Experiment Station.

IRISH POTATOES IN SOUTHSIDE VIRGINIA.

Editor Southern Planter:

For many years this section of Virginia has been raising tobacco and buying everything necessary on the farm with the proceeds of tobacco. With the introduction of Farmers' Institutes and Farmers' Clubs, things are changing. Some two years ago a Farmers' Club was formed in this section, which has done a great deal in the way of solving the question, what must the farmers do to make a living outside of tobacco. One way they have demonstrated this is by raising Irish potatoes. Last year the members of the Club raised some five or six thousand bushels of as fine quality as raised anywhere. Some farmers make as many as 250 bushels to the

acre. The members of the Club are very much pleased to find that we can raise this most useful vegetable in such quantities. This Club had an exhibit of farm products at Crewe in November. It was very creditable. The exhibit especially of potatoes was very fine.

T. O. SANDY.

We understand that the Irish potatoes raised so successfully in this section are not the first early crop, but a crop maturing in the late summer and early fall. At that time the market is bare of supplies, as the first early crop of the South is gone and the Northern crop is not ready for lifting. A grower of this crop tells us that from July to October or November there is always a good market for the potatoes in all the towns of the States south of Virginia. He ships all his crop South, and raises a later crop for winter use at home and for the winter markets of this State and the States immediately south of Virginia.—Ed.

THE CORN CROP AND ITS NEEDS.

Editor Southern Planter:

Indian corn is the greatest of our cereal crops used for the feeding of cattle and hogs and the food of mankind combined, and its importance to the farmers in all parts of the country can hardly be over-estimated. And yet, there is no crop that varies so much in production per acre. Though one soil expert will make us believe that all soils have the same average amount of soluble plant food, there is no doubt that the wide stretching roots of the corn plant find more food in some soils than in others, no matter how carefully they are cultivated, nor how well watered, and the farmer who neglects to accumulate more plant food in his soil, usually finds that his corn crop shows the effects of his bad treatment sooner than any other. Much has been said and written of late in regard to the improvement of corn by selection of seed, and there is no doubt that by proper breeding, the corn crop can be greatly increased independently of the improvement of the soil. But both should go hand in hand. Most of the so-called corn breeders give a great deal of attention to the character of the ear and grain, and these are important points. But the breeding of any plant that looks simply to the improvement of a single feature of the plant, can never be as successful as one that takes the whole plant into consideration. In breeding corn, one must know what his particular section needs. If he is in a region of short seasons and early frosts, he must take earliness of the plant into

serious consideration, as well as its productiveness. If he is in the South, where he has time enough to mature any variety of corn, he need give attention only to the character of the plant and its productiveness. In the South the farmers have for generations been breeding simply for the biggest ear. They have gotten the big ear, and only one on a stalk, and this on strong land up out a man's reach, and with such tall growth that it seems necessary to plant the crop wide apart. The result is that single stalks, six feet apart, with a single ear at best on them and some with none at all, make it impossible to get a large crop. The breeding then that is needed in the South is breeding for a more dwarf and sturdy plant and one that uniformly carries two ears or more. The Editor of one of our farm papers, recently told an inquirer who wanted to know how to overcome the tendency of corn in the South to grow so tall, that it was a climatic effect which no breeding could overcome. But right here, in the South, it has been overcome, and we have a corn that bears uniformly two or more ears near the ground and of a stature that admits of its being planted nearly as closely as in the North, and which on sandy uplands has made 69 bushels of corn per acre on land that formerly brought only about ten to fifteen bushels. In breeding corn, we must form in mind an idea of the plant we want to produce and breed towards it year after year, for the result can not be had in a single season. Then we want to remove disturbing influences. In hundreds of fields we see nearly one-third of the stalks without any ear. These barren stalks are the strongest males in the field, and if allowed to ripen pollen will make more and more barren stalks the next season. Cut out the tassels from each as soon as they show, then select the stalks that bear two ears, and to get the plants down to a more dwarf and sturdy character use for a time only the lower ear for seed; it will not be the best ear, but it will have a tendency to get nearer the ground and to bear an ear above it. When you have the ideal plant, then will be time enough to select the best ears. But always select in the field and from the stalks that bear at least two ears. Corn is always best when bred in the section where it is to be planted, and seed brought from far north or south of any locality must always be acclimated before it will adapt itself to the new conditions and do its best. Having the ideal corn plant, the next important thing in the production of big crops is the preparation of the land and the feeding of the crop. The one-horse plow has been the cause of more poor crops in the South

than any one other thing. The gullies in our hills have been largely due to the scratch plowing of the past. The shallow plowed soil fills with water and runs off on the hard soil below and a gully is started, and is annually enlarged by the frosts of winter. We need deeper breaking of the soil to enable it to hold more water for the crop, and to withstand droughts, and to prevent washing. But after we have this soil deeply plowed and well prepared, we do not want a plow in the corn field afterwards. "Laying by" corn with a turning plow and a big furrow is responsible for much of the short corn and also for the washing of the land, for the water collects in the deep furrows till a head forms and breaks over and runs down the hill, and the loose soil is washed into a gully. This would not happen if the crop was cultivated shallowly and flat so as to form no furrows for the water to accumulate in. Then the deep plowing cuts the corn roots, and damages the crop, and also dries out the land by turning it up to the sun, and the crop suffers from droughts. But no matter how well the land is plowed nor how carefully it is cultivated, if the plant food is not there in an available form, the crop will not be as large as it should be. What is most needed in the South is *farming*, as distinguished from the old time *planting*. Corn after corn, cotton after cotton, one crop continually, will never restore the fertility of our lands no matter how much fertilizer or what brand you use. We need to adopt a rotation of crops that will frequently bring in the recuperative legume crops. This is more especially needed by corn than almost any other crop. We have experimented many years with fertilizers for various crops, but never yet have we been able to find a profit in the use of a complete commercial fertilizer on the corn crop. By a complete fertilizer, I mean one containing a due percentage of Nitrogen, Phosphoric Acid and Potash. By the use of such a fertilizer we can materially increase the yield of corn, and the casual observer might suppose that it paid. But leave one piece without any fertilizer, and the rest with a complete fertilizer, and you will find as I have found that the increased crop will not pay for the fertilizer used. How then, in the absence of a sufficient amount of stable and lot manure are we to increase the corn crop? Just as I have said, by the use of a short rotation and plenty of peas or other legume crops to furnish you the nitrogen. In a complete fertilizer the nitrogen, pound for pound, is worth twice as much as the phosphoric acid and four times as much as the potash. That is in a low grade fertilizer containing 40 pounds of nitrogen, 160 pounds of

phosphoric acid, and 40 pounds of potash, the nitrogen costs twice as much as the phosphoric acid and four times as much as the 40 pounds of potash.

In fact, about half the cost of the fertilizer is the nitrogen, and in a fertilizer with a high percentage of nitrogen, the difference will be greater. Corn needs mainly nitrogen and potash as food. Nitrogen bought in a fertilizer mixture costs too much to make it pay on the corn crop. Now as nitrogen is most needed for the corn crop, we must get it more cheaply than in a complete fertilizer to make it pay. Through the aid of the legume crops and the liberal use of the mineral fertilizers on the legumes, we can get all the nitrogen the crop needs, and can not only do this but can make a profit out of the getting it. That is, we can, by using the phosphoric acid and potash liberally in increasing the growth of the legume crop get a large amount of forage for feeding stock and making the manure the corn crop especially prefers, and can at the same time leave in the ground nitrogen enough for the following corn crop. It is this feeding of the crop that feeds the stock, and the land at the same time that lies at the very foundation of all improvement, not only in the corn crop, but in the productiveness of our soil for all crops. If every hoed crop of corn or cotton has a legume crop preceding it, and that legume crop is heavily fertilized with phosphoric acid and potash, it will do the rest. Not only this, but the legume crops increase the humus in the soil by means of their roots and the manure made from feeding the tops, and the soil is rendered more retentive of moisture, and better able to stand a drought. Thus by proper breeding of the seed, a proper preparation of the soil and a proper fertilizing of the plant, we can increase the corn crop of the South threefold or more.

W. F. MASSBY.

SAVING THE COW PEA CROP.

Editor Southern Planter:

I am mailing to you to-day under a separate cover, views of two different parts of the same field, showing a crop of pea hay grown this year by me. Thinking that my experience, with this crop might be of some value to some of your readers, I will describe as near as I can the handling of it from the beginning to the end. Plot No. 1 contains, four and three-fourths acres. One acre was in red clover. This leaves three and three-fourth acres in peas, which produced thirty-seven stacks as shown in the view, and seven two-horse loads of about 1,000 pounds each,

that was not stacked. A strip of about three-fourths of an acre was cut earlier than that in the stacks, and cured on the ground in the usual way, and hauled up for early feed. Plot No. 2, contains eight acres, and produced sixty-eight stacks, and ten two-horse loads of 1,000 pounds each. All the stacks were about the same size of about 500 pounds each. The varieties grown were red ripper, black, blackeye and clay. I had best results from the red ripper.

The land for this crop was fallowed just as soon as the wheat could be gotten out of the way, I used a No. 20 Chilled plow; and plowed deep enough to get up right much clay in order to deepen the soil. It was harrowed twice, and one bushel of peas and one gallon of Kafir corn per acre was put in with drill and then rolled, with a home-made roller, which left the land smooth and in nice shape for cutting the crop. About the last of September I started the mower, which was followed immediately with the rake, the vines being raked up green and not allowed to take any sun. As soon as the rake had started, one man was put to digging holes eighteen inches deep; as small as possible, with a regular post hole digger, with which the holes can be dug very rapidly, another man followed, setting up the poles, and nailing on the bottom strips, others followed stacking the hay. By this means, the same day that I finished mowing, my hay was all stacked and out of the way. Being put in rows, the land was ready to plow for the wheat crop. This plan of curing, I got from Mr. Blacknall, through the "Southern Planter," and his directions were followed, except my poles had a part of the limbs left on them, those at the bottom being left two feet long. Near the top, they were shortened, I used two cross arms one foot from the ground, and when the stacks were about half way up, another set of cross arms was put on, which were four feet long—this making the stacks five feet in diameter and ten feet high. This hay cured perfectly, was bright, sweet, tender and free from any mould, notwithstanding the prediction of my neighbors, that I would have in about ten days a fine lot of manure to scatter on my land. When the stacking was through I began breaking the land with single-shovel plows for the present wheat crop. After the plowing was over I applied one ton of lime per acre, which was scattered with a shovel as soon as slacked. On the 15th of October my hay was dry enough to go to the barn. The hay was cut as fast as hauled, with a power feed cutter; and elevated into the barn with an exhaust fan. I have been feeding this to my stock since the middle of September, and have been able to

reduce my grain feed about half to my mules and horses. I will say right here, that the saving in waste will more than pay for the cutting. After hauling off the hay; the poles were pulled up and stacked out of the way; ready for the next crop of peas, which I hope to put in next summer.

When the stacks were out of the way the land was double disk harrowed, rolled and double harrowed again, then one and one-half bushels of wheat and 300 pounds of dissolved raw bone (analysis, 2 1-2 ammonia and 12 phosphoric acid), to the acre was put in with a drill. This was sown October 25th, and is looking all right now.

The land is about an average of Henry county land, and at one time was very poor and full of stumps and rock.

I wish to say that this plan of curing pea hay; learnt from your paper; has saved me in this one crop; more than the cost of the subscription to The Southern Planter for the next twenty-five years, so I will call myself ahead on this score alone, up to that time.

D. F. DUNLOP.

Henry county, Va.

The photographs of the crop which accompanied the above article, showed the pea hay in stacks, and the lime put in the field in small lumps ready for spreading. We would have liked to reproduce them, but they were so indistinct, that we could not secure a plate that would print.—Ed.

BALANCING MANURE, GREEN CROPS, ETC.

Editor Southern Planter:

The following is an extract from an article in your January issue:

"The use of potash (muriate) and acid phosphate on manure is advisable, as it not only tends to prevent heating and dissipation of the ammonia, but also adds the two constituents of plant food in which the manure itself is deficient.

Doubtless farmers lose much for lack of a proper balance for their various domestic manures. To balance horse manure for corn, twenty-five pounds each of potash and phosphoric acid should be added for each ton of 2,000 pounds of manure. Fifty pounds muriate of potash will furnish the necessary potash and 180 pounds of acid phosphate will furnish the necessary phosphoric acid. Thus balanced a ton will go as far as three tons of unbalanced manure.

The following is an extract from an article: "Rotation—Liming—Cow Peas—Clover," in January issue.

"Plow this crop (crimson clover, or Hairy vetch mixed with rye, wheat and oats, ten pounds of crimson clover and three-quarters of a bushel of the mixed grain) down in April or May and plant in corn."

A great error on the part of the farmers, is that they turn down their green crops too soon—in too much haste to follow with another crop. Green crops as they are called, should not be turned down until fully ripe, and if they first fall to the ground, so much the better. Green vegetable matter is apt to sour the land and do a positive injury. When practical a sod should remain several months before seeding thereon. During the period of decomposition important chemical changes take place that largely increase the fertility of the soil.

In your January issue Mr. B. F. Wright has an excellent plan for utilizing corn stalks, which is to cut them into proper lengths with a disc harrow and then turn them under. His idea as to humus is excellent. Everything should be turned under to rot. Did Mr. W. ever try wide rows for corn, say six to seven feet apart, with cow peas drilled midway between the corn rows? On suitable land, very nearly a full crop each of corn and cow peas can be grown, and after the corn has been gathered, the corn stalks and pea vines can be turned under, thus largely increasing the supply of plant food for the crop.

BRYAN TYSON

Monroe county, N. C.

Whilst it is true that there is force in what Mr. Tyson says as to turning under green crops when immature, yet there is little danger of souring the land by turning under a winter-grown crop in the spring, as a preparation for a corn crop. The land at that time is cold and an acid fermentation of the crop is not much to be feared. A green crop turned down in the fall before it is mature, is a frequent source of sourness in the land, as the soil is then heated and acid fermentation results.—Ed.

ENQUIRERS' COLUMN.

Enquiries should be sent to the office of THE SOUTHERN PLANTER, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

Reclaiming Wasted Land.

I have recently come into possession of a tract of land on the Severn river in Eastern Maryland, the soil being a rather light sandy loam with clay subsoil, and as you have valuable information and experience in reclaiming and handling these lands in Vir-

ginia, I take the liberty of asking your advice in this matter. This land, some 200 acres, has not been worked for several years, and now carries only a light crop of weeds. It appears practically exhausted. May I ask you what course I should pursue as to plowing, fertilizing, etc., to bring this land back to a state of fertility? I wish to put quite a large amount of it into alfalfa, some into vegetables, potatoes, etc., and 30 or 40 acres in grapes and peaches.

Cook Co., Ill.

FRED. W. LEE.

Land in the exhausted condition you describe cannot be made to produce profitable crops at once. It did not become impoverished all at once nor can it be restored to fertility at once. We advise that you plow the land at once, plowing a little deeper than it has ever before been plowed. Then apply 50 bushels of lime to the acre and harrow this in lightly. Let it lay then for a month or more and then commence to work it fine. Apply in May 300 pounds of acid phosphate to the acre broadcast and sow one bushel of cow peas to the acre broadcast and harrow in, or drill half a bushel of cow peas to the acre in rows 18 inches apart. If drilled, work the crop two or three times with the cultivator. In the early fall, say August or September, when the peas are dying down, plow the crop under, turning a little deeper furrow than in the spring. Apply 250 pounds of acid phosphate to the acre and sow a mixture of 12 pounds of Crimson clover and three-quarters of a bushel of wheat, oats and rye mixed to the acre broadcast and harrow in. This will cover the land for the winter. In spring, say May, plow this crop down and sow cow peas again with acid phosphate, and in the fall follow with the Crimson clover and grain mixture, or with Hairy vetch and the grain mixture. Either of these crops should then give you good pasturage in the spring or a hay crop in May, or may be plowed down. Follow with corn. Sow cow peas in the corn at last cultivation and either graze these off or plow down and follow again with Crimson clover or Hairy vetch and the grain mixture, and then in the spring the land should give you good pasturage and hay and may then be laid out for a rotation in the staple crops of the State. Until your soil is filled again with humus it will not produce good crops of any kind.—Ed.

Improving Land.

I have just purchased a small farm lying directly on the bank of the Rappahannock river, and, if space will allow, would like to ask a few questions.

The river field is a light sandy soil, through which is more or less mixed loose oyster shells. These shells have been present for a long time, probably several hundred years. Some are broken, while some are comparatively whole, and all are hard and flinty, and show no sign of decay.

1. Do these shells in this state furnish any lime to the soil? This land having been rented out, has been planted to corn for eight or ten successive years; sometimes preceded by English peas the same spring. It is my desire to

prepare a part of the field mentioned for alfalfa, and improve the whole by sowing leguminous crops and turning under. This season I expect to sow cow peas, soy beans and a few velvet beans as an experiment.

2. Which of these would you advise as best suited for this soil, and what kind and how much fertilizer to use? In the fall I will turn under the soy beans and cow peas and sow crimson clover. Next spring will turn under crimson clover, and sow cow peas where soy beans were the previous year and vice versa. In the fall sow the red clover and the following fall after cutting clover sow a part of the field in alfalfa.

3. Do you approve of the plan laid out? If not advise me of a better one. (I do not care to sow wheat), also at what time should lime be applied to the soil, as I am sure it needs it? I. W. H.

Essex county, Va

1. No doubt these sheels are slowly disintegrated by the weather, and thus add some lime to the soil, but we agree with you that liming—say, at the rate of 25 bushels to the acre—would be advisable.

2. You will find both cow peas and soy beans successful as improvers of this land, followed by crimson clover in the fall. Use plenty of Acid phosphate on the land—say, 300 or 400 pounds to the acre—before seeding these crops, and instead of rotating peas and beans, plant them on the same land each year. Their success largely depends on the proper bacteria being in the soil and frequently the first year they only make a light yield from absence of bacteria, whilst in following years they will make good crops. Velvet beans will no doubt grow on the land, but as they will not mature their seed in this State and can be used only as an improver of soil, we think you would do better to use only the cow peas and the soy beans. The velvet bean crop does not mature the vines so fully as the cow peas and soy beans, and is, therefore, more apt to sour the land when turned under. They are better for States further South. We think when you have improved the land by the growth of the crops suggested, that alfalfa would be likely to do well upon it, if proper preparation is made for the crop.—Ed.

Rape for Chicken Pasture.

Will you state in your valuable paper the value of Essex rape as a green chicken food. I know that clover and alfalfa are good, but I want something for them this spring. What would you recommend? B. J. FERGUSON.

Lumpkin Co., Ga.

Rape makes a good early pasture for chickens, and they are fond of it; sow at once. Turnips also make a good pasture or spring kale.—Ed.

Peach Orchard.

Will some one please give instructions for caring for young peach trees. Especially how to keep borers from injuring them? I have tried removing the soil from around the body and cutting them out with a knife; but this is very tedious, and often the tree is so badly injured, that it dies. Will tar paper prevent the moth from depositing the egg when it is wrapped around the body? J. B. M.

Giles county, Va.

All the large peach growers say that removing the soil from the body of the tree and cutting out the borers, when they are seen to have attacked the tree, are about the best remedies for these pests. Possibly tar paper wrapped around the trees might have a deterrent effect in keeping off the moths, but we are not aware that this remedy has been any where largely used.—Ed.

Alfalfa in Cuba—Cattle for Cuba.

I have been farming for six years, and had absolutely no experience prior to coming to Cuba. During this period, I have read The Planter, and as far as conditions permitted, tried to follow the advice contained therein, and it gives me pleasure to state that it has resulted in most instances favorably.

Will you give me your advice on the following subjects?

1. From your knowledge of the geographical position of Cuba, etc., do you think alfalfa would do well here?
2. Would the rainy season be apt to kill it?
3. Would a top dressing of fresh manure injure it after being cut?
4. Are Shorthorns, as a rule, good milkers?
5. Ordinarily, what do Southern feeders pay per 100 pounds for good grade Hereford or Shorthorn steers.
6. Which breed would do the best here where there is no winter, and stock are grazed on Guiney and Panama grass pastures all the year?
7. I intend importing 2 bulls and 4 cows this spring, and thought of getting both breeds, running Herefords with range cows and raising some Shorthorns for milk cows. I have written to two of your advertisers.
8. Are the Silver Laced Wyandottes the equal as a laying breed of the Brown Leghorns.

E. L. WINSLOW,

Pinar del Rio, Cuba.

1. Yes, we think alfalfa can be successfully raised in Cuba; at any rate, we would try the experiment. We know that it grows successfully in Mexico and in the hot sections of South America, and we see no reason why it should not grow in Cuba.
2. Not on well drained land, but care must be taken to provide good drainage.
3. No, but it should not be covered too thickly.
4. There are two strains of Shorthorn cattle, a milking strain and a beef strain. The milking strain, which are rather difficult to secure in this country, as the tendency has been all along to raise this breed for beef are good milkers.
5. The price varies from three cents to four cents per pound usually.
6. Either breed should do well in your climate and on such pastures as we understand you have. You should use a Hereford with the range cows and from the Shorthorns raise dual purpose cattle.
7. Silver Laced Wyandottes are good layers, but we question whether they will on the average lay as many eggs as the Brown Leghorn.—Ed.

Insects in Fruit Trees.

Can you tell me, in your next month's journal, what I can use to keep caterpillars off my apple trees?

Prince George Co., Va.

W. H. BELCH.

In our next issue you will find a spray calendar, giving instructions for sprays to destroy insects and fungoid pests on fruit trees.—Ed.

Riding Cultivator—Improving Land.

1. I am contemplating the purchase of a two-horse riding cultivator, and would be very glad to have your advice as to the kind of machine best adapted to my place. My land is rolling, and a part has never been cleared of stumps; it also has some small stones on it. Would you advise the use of a disc or hoe cultivator for such land?

2. The land here is principally what is known as a "fine tobacco soil." It is gray, sandy soil, with yellow subsoil. Comparatively new land will produce only about ten bushels of wheat and fifteen to twenty bushels of corn. Can

such land be brought up and made to produce good crops of grain by growing peas and clover? A SUBSCRIBER
Pittsylvania Co., Va.

There are a number of Riding Cultivators on the market practically varying very little in the work they will do. Send to the implement dealers whose advertisements you will find in this issue for their catalogues. We think you would do better to buy a disc cultivator rather than a hoe for such land as you describe. The land you describe can no doubt be greatly improved by growing cow peas and clover, but you should give it some lime, and then previous to seeding the cow peas and clover, apply 300 or 400 pounds of acid phosphate and 100 pounds of muriate of potash to the acre. These crops are large consumers of mineral fertilizers, and must have them if they are to improve the land. They will get the nitrogen required from the atmosphere.—Ed.

Effect on Milk and Butter of Feeding Rich Rations to Cattle—Hairy Vetch.

1. Will feeding cows rich food increase quantity and quality of butter or flow of milk, and necessarily, more butter?

2. Could a crop of "Hairy Vetch" with oats be put in this or next month with prospect of success? J. F.
Gloucester Co., Va.

1. Several experiments have been made at different Experiment Stations with the object of ascertaining whether there is a possibility of feeding fat into milk, but the results have been of no value practically. You cannot make the milk richer by feeding rich rations. Long continued good feeding with well-balanced rations will no doubt result in an improved yield and quality of milk, but not sufficiently so, so far as the quality is concerned, to be largely appreciated.

2. Although Hairy Vetch should properly be sowed in the fall, yet we have known a fair crop made seeded with oats in the spring.—Ed.

Cow Peas.

Does February or March plowing produce any better crop of cow peas than April or May?

2. What kind of fertilizer is best to sow with cow peas, and how much per acre?

3. Would it be advisable to sow clover with cow peas? If so, what kind would be best? I want to make hay from the cow peas I sow this spring and seed the same piece to oats next spring, 1906. I thought by sowing the cow peas and clover about the middle of May they would be ready to cut about the first of September. My object for sowing the clover is for fall and winter pasture, also for more sod to plow under.

4. Does sowing clover stand any longer before it dies than the old time red clover?

5. Why is it in this part of the country, where almost all farmers sow wheat, clover and timothy in the fall, giving the field a second sowing of clover in the spring, the clover comes up well and is often six to eight inches high at harvest, after letting it get ripe in the fall and cutting it for seed it so often all dies?

6. In planting corn what do you think of marking off the field one way with a marker and the other way with a one-horse single shovel plow, making a furrow about five or six inches deep (provided the land is not hilly), then plant the corn in that furrow with hand corn planters?
Rockingham Co., Va. W. M. HEATWOLE.

1. Yes, no doubt, the crop will be better for the land being plowed early and well worked before planting.

2. Acid phosphate will be all that is needed in your section as a fertilizer. Apply 300 or 400 pounds to the acre.

3. No; the cow peas almost invariably smother out the clover. If a late crop of cow peas were seeded—say in July—and cut off early—say in August or September—for feed or hay, probably a stand of clover and grass might succeed. We have known it to do so, though this is often killed by being smothered.

4. If Sapling Clover, or, for that matter, Red Clover, be prevented from seeding by being cut off just at blooming or before, it will last for several years, but all the clovers, when once they have seeded, die out.

5. See answer to No. 4.

6. The effect of marking off the field in the way you suggest would enable you to cultivate the field both ways, and in this way economize labor in keeping the crop clean and cultivated.—Ed.

Mixed Crops of Cereals.

Can you, through your paper or otherwise, give us any reliable data as to the increase, if any, to be gained by sowing a mixture of two of the cereals over either planted separately?

This would mean, in our case, an addition of barley to our seeding of spring oats, if by so doing we would produce an increased weight of grain per acre. Do you know any objection to such a procedure? Such as difference in time of ripening, difficulty in harvesting or threshing?

What variety of barley would you recommend for sowing with an ordinary white oat on good corn land in Ohio river bottom, latitude 38 degrees? What proportion of each grain, and how much of both for seed per acre? P. S. L.
Mason Co., W. Va.

We have known several experiments made in growing mixed crops of cereals, but not with barley as one of the constituent parts. Where oats, rye and wheat have been sown together, the yield was much heavier than in either crop grown separately on the same land. We are of the opinion that the effect will be the same, if barley is mixed with the other cereals. It is usual to mix them in about equal parts. We would use the barley, which is usually grown in your section, for mixing.—Ed.

Bermuda Grass in Southwest Virginia—Pasture Rotation.

On page 12, of January, 1905, SOUTHERN PLANTER, you say our elevation is too high for Bermuda grass. In this you are mistaken. It flourishes here, the trouble is to get rid of it. About twenty-five years ago a gentleman from Mississippi moved to Salem, Roanoke county, Va., and in unpacking he scattered Bermuda hay. From this seed the grass got a hold and has spread. For pasture it is fine, stands more and closer grazing than any grass I ever saw, but will root out other grasses, and is very annoying in cultivated fields, especially in corn, where you have to "fite it," as said General Forest in his famous reply. Rye makes the earliest pasture, follow this with sorghum, and later with peas, oats, rye and wheat. Of course, you must have them in separate patches, as you cannot take off one in time for the other. The rye and sorghum will afford two cuttings. SALEM.

Roanoke Co., Va.

Spring Wheat in Virginia.

Please let me know if you think a man could raise spring wheat on top of the mountains in the northern part of Virginia on fairly good clay soil. G. H. THUMBO.

Warren Co., Va.

Spring wheat has never succeeded in the Southern States.

Possibly on the top of your mountain you might do something with it, but we doubt this.—Ed.

Yams and Potatoes—Goats for Cleaning up Land.

1. I want to try yams and potatoes this year. Do you think we can make a success in raising yams here in this county? We have gray and red soil, with a red bottom, very hard. We are subsoling some of it.

2. Have lots of creek bottoms grown up with bushes. Do you think it would pay to get goats to clean them up? Will barb wire turn goats? If so, how many strands?

Campbell Co., Va.

W. C. JONES.

1. Irish potatoes can be raised well enough in Campbell county, and both yams and sweet potatoes should succeed on suitable land.

2. We know several parties who are well satisfied with the cleaning work done by goats. Plain wire will turn goats just as well as barbed wire, and will not pull the hair out so much. A fence four feet high with five or six strands of wire will keep them in if the posts are set pretty close so that the wire will not be easily sprung apart.—Ed.

Hop Growing in Virginia.

Can you give me any information whether hops can be grown with success in this section of Virginia. I am thinking of growing them for market?

GEO. W. GRAY.

Caroline Co., Va.

Hops have never been grown commercially in this State, so far as we know, nor yet experimentally. However, as they grow wild nearly all over the State and the adjoining States, excepting in the mountains, we have no doubt that you could grow them under cultivation, but whether profitably we do not know, as there is no market here for them.—Ed.

Virginia, its Land and Products.

1. Are Virginia lands adapted to grazing?
2. What is the average yield per acre of corn, oats, Irish potatoes, timothy and clover—crops unfertilized?
3. What are the usual prices of Irish potatoes, dairy products, fat cattle, hogs and sheep on foot?
4. Is the State adapted to sheep raising? If so, what parts are best?
5. Can the soil be built up?
6. Is it true that it is difficult to procure a valid title to Virginia lands?

ROY WILLIAMS.

Cantfield, Ohio.

1. We have some of the finest grazing land in the world in Southwest Virginia. Export cattle are made on these lands without any grain. The middle, southern and eastern sections of the State are not grazing sections.

2. The average yield of corn, as shown by the government tables, is 23 bushels to the acre. We have, however, plenty of land producing from 50 to 100 bushels to the acre, and there is no reason whatever, except bad farming, why the average yield should not be doubled.

3. These vary so much from month to month that it is difficult to name a usual price. Irish potatoes run from 50 cents to \$1 per bushel; butter, from 20 cents to 50 cents; milk, 4 to 6 cents per quart; fat cattle, from 2½ to 5 cents per pound; hogs, from 4 to 6 cents; sheep, from \$2.50 to \$5 per head.

4. Yes, much of the State is admirably adapted to sheep husbandry. The Piedmont and Southwestern sections are best.

5. Yes; under proper management the soil quickly responds.

6. No; there is probably no more difficulty here than in any of the older States.—Ed.

Tamworth Hogs—Chicken Cholera.

1. I understand, Mr. Editor, you and the Tamworth hog are from the same country, so I think you are in a position to tell me something about them. Are they suited to the climate and conditions in Southside Virginia? If so, why so few in the State?

2. I have been told by a very intelligent gentleman that in the limestone sections of Virginia chickens do not have cholera, and that lime put in the water they drink will prevent them from having this disease in this section of the State. Please give me some data on the subject in your next issue.

SUBSCRIBER.

Halifax Co., Va.

1. The Tamworth hog is an English breed from which excellent lean bacon hogs are made. It is a very long bodied hog, and carries a less proportion of fat to the lean than any other breed. They are popular in Canada for making breakfast bacon for the English market, but have never been popular in this country, and few are kept. We know of none in the South, though we know of no reason why they should not do well here after becoming acclimated.

2. We doubt very much whether lime would have any effect in preventing chicken cholera. This is a microbic disease, and is spread and perpetuated by the dissemination of the microbes in the evacuations. When a place is once infected with these the disease is sure to break out sooner or later. As yet no positive remedy has been found for it. Carbolic acid in the drinking water seems as effective as anything tried.—Ed.

Fertilizer for Corn—Cotton and Peanuts.

1. Will you please advise me what is the best fertilizer to use for corn on a light sandy land that was not in cultivation last year, and has hen grass on it now? The land is poor, and I will not be able to use any manure except commercial fertilizer; also please say how much, and when and how I must apply it for best results?

2. Please advise what is the best and cheapest fertilizer to use under cotton upon land that was not in cultivation last year, and has a large growth of hog weeds, etc., on it now? The land is a medium soil, and is in a fair state of cultivation. I have enough barnyard manure to cover the poorest parts. Also please write how much and how best used for good results?

3. Please advise what is the best fertilizer to use under Virginia peanuts on medium light land that was not in cultivation last year, and has a fair growth of hog weed, etc., and is in a fair state of cultivation? I shall use about 400 pounds of shell lime to the acre in drill, and when peanuts are worked last time will use 200 pounds of land plaster to the acre.

JOSEPH L. SKYES.

Southampton Co., Va.

1. We have never known commercial fertilizer to be used profitably on corn. It will very frequently, if applied liberally, give an increased crop, but rarely sufficient to pay for the fertilizer. Farmyard manure is the only profitable fertilizer on corn. The great need of the corn crop is perfect preparation of the land before planting the crop. Plow and subsoil the land as early in the year as possible, and then keep it constantly worked with the harrow and roller until a fine seed bed is made. Apply 25 bushels of lime to the acre as soon as plowed and work this into the land. A few weeks before planting apply 300 pounds of acid phos-

phate and 50 pounds of muriate of potash per acre and work into the soil. When the corn has commenced to grow freely apply 75 to 100 pounds of nitrate of soda per acre and cultivate this into the soil. Cotton seed meal may also be used on the crop sometimes with advantage. This should be applied at the same time as the acid phosphate and potash, and will give a supply of nitrogen to the crop during the period of growth. It is slower in action than nitrate of soda. Apply 500 pounds to the acre.

2. In our next issue we intend to deal with the fertilization of the cotton crop.

3. A crop of peanuts of 60 bushels to the acre contains in nuts and vines 84 pounds of nitrogen, 14 pounds of phosphoric acid, 32 pounds of potash, and 46 pounds of lime. Part of this nitrogen is obtained from the atmosphere, the peanut being a legume. A proper fertilizer for supplying sufficient nitrogen, phosphoric acid and potash can be made from 300 pounds of cotton seed meal, 80 pounds of acid phosphate, and 240 pounds of kainit. Apply 20 bushels of lime to the acre when it is first plowed. We do not think you will get any advantage from the plaster.—Ed.

Cow Peas—Varieties.

We have inquiries as to the relative value of the different varieties of cow peas, and especially as to the value of the New Era variety. The yield of the different varieties of cow peas depends much on where the seed has been raised. They all seem to require to become acclimatized before doing their best. At the Arkansas Station, where probably the most complete experiments have been made with cow peas, seed locally raised of all varieties gave the best results. In a test of 35 varieties made in 1902 the New Era, with one or two other varieties, gave good crops of peas earlier than most other varieties, and a larger proportion of peas to vines. In 1903 this was also the case. The New Era seems to be especially a variety adapted to Northern and cool sections, as it matures more quickly than most other varieties. It has done better at several Stations further North than any other variety.—Ed.

Difficulty in Churning.

1. Please tell me what the cow needs when the milk foams very much and we can't get the butter to gather unless by putting in hot water?

2. Also please tell me what is the best food for a cow to make butter fat? Is chop good, such as cut shucks with equal parts wheat, bran and corn meal sprinkled on after scalding?

3. Please tell me also what is the best food to produce eggs with poultry?

JOHN T. RUCKER.

Bedford Co., Va.

1. It is not something the cow needs that causes the difficulty in churning. You do not have the cream at the proper temperature when put in the churn. If you are churning cream alone the temperature should be about 58, but if there is a large proportion of milk with the cream then the cream should be warmed up to 60 or 62 degrees before being put into the churn, and be kept at that temperature by being churned in a moderately warm room.

2. You cannot feed butter fat into milk. The cow herself regulates this, and the amount of fat depends on the breed and nervous temperament of the cow. You should feed the fodder cut along with the shucks. The fodder itself is better feed than the shucks. Add to the wheat bran and corn

meal two pounds of cotton seed meal per day, and feed 10 to 12 pounds of the mixed grain ration daily.

3. In this issue you will find an article dealing with the feeding and management of hens. A mixed grain ration of wheat, oats and corn is usually best, part fed as a hot mash and part in grain. To this should be added twice a week some cut green bones, and the hens should be kept busy scratching for the grain feed.—Ed.

Shredded Fodder.

Can you tell me what number of pounds of shredded fodder I ought to get off an acre of land that would yield 25 bushels of corn to the acre; also what per cent. stock would eat—I don't think the stock would eat much of the stalk. What would be a good allowance of shredded fodder per head of stock with and without grain?

Forsyth Co., N. C.

C. E. SHELTON.

A crop of corn making 25 bushels of grain should make from one and one-half to two tons of fodder when well dried. If the fodder has been well cured and is sweet and good the cattle will eat nearly the whole of it. Feed what the cattle will eat up clean. The grain ration may be with advantage fed on the shredded fodder. Damp it with water and then mix the grain with it.—Ed.

Price of Lime—Alfalfa.

Would you advise the buying of lime for agricultural purposes at a cost of 90c. to \$1 per barrel when only able to obtain it by the barrel?

2. Do you think we would be likely to procure a stand of alfalfa sown in the spring if a good preparation is made?

Caroline Co., Va.

F. TOMKINS.

1. Lime at 90c. to \$1 per barrel is too costly to use for agricultural purposes. You should get it at about \$4 per ton.

2. Whilst we advise that alfalfa should always be sown in the fall in middle and eastern Virginia, and in the spring in the mountainous sections, we have known a good stand to be secured seeded in the spring without any grain with it. Give the land a light dressing of lime—say 20 bushels to the acre—procure alfalfa bacteria from the Department of Agriculture at Washington, and inoculate the land, make it rich with some bone meal and you may probably succeed with the spring seeding.—Ed.

How to Dispose of Corn Stalks.

I notice in your December number, J. L. Camp asks how to dispose of corn stalks. We find here on the Illinois prairie that the best way is to go into the field with a sharp disk well weighted, running first lengthways then crossing, and, if one has time, go over it still a third time. This not only cuts the stalks up so that they can be easily turned under, but it breaks up and fines the surface, making the ground plow much better and saving at least one harrowing after plowing. In going over the first time the gangs of the disk should run on the rows and not astride of them. This is easier managed if three horses are used, as they can then walk between the rows and bring the middle of the disk half way between two rows. Our corn stalks may not be quite so large as Mr. Camp's, but they average eleven or twelve feet, and are very thick on the ground, three in a hill, three and a half feet each way.

Christian Co., Ill.

Geo W. BLISS.

Cotton Seed Meal and Hulls.

I see circulars for a new cotton seed huller, claiming to make 900 pounds hulls and 1,100 pounds meal from one ton seed. Price for working seed \$2 per ton. Is this hulled seed or meal as good fertilizer as meal, and is it cheaper

than meal at the present exchange prices? How many pounds of meal and hulls from a ton of seed?

Laurens Co., S. C.

SUBSCRIBER.

The average of a number of analyses of cotton seed show that the hulls amount to 49 per cent. of the seed, and the kernels 51 per cent. The hulls are mainly woody fibre containing about .69 per cent. of nitrogen, .25 per cent. of phosphoric acid and 1.00 per cent. of potash. The kernels or meal by analysis are shown to contain nearly 5 per cent. of nitrogen, 1.73 per cent. of phosphoric acid, and 1.14 per cent. of potash. Any mixture largely made up of the hulls must therefore necessarily be but a poor fertilizer as compared with the meal. A ton of cotton seed (2,000 pounds), will produce at the mills 20 pounds of linters, 1,080 pounds of kernels or meal, and 891 pounds of hulls.—Ed.

Cotton Seed.

I see in the SOUTHERN PLANTER you told a North Carolina farmer to save cotton seed for planting from the first picking. Now, in my humble opinion, this is not good advice. I always saved seed from second picking and kept it over as long as four years, if I could, before planting.

The seed from the first picking is nearly all faulty, and if they come up to a stand, they will "never be healthy" or make a maximum crop. It is a good plan to keep them as long as the germ is sound.

W. F. M.

In a multitude of counsellors there is wisdom.—Ed.

Disease in Young Chicks.

Can you give me some reliable remedy for the disorder of the bowels which often attacks young chickens when only a few days old, causing them to become weak and droopy and gradually pine away? Seems especially prevalent in July and August.

LOUIS AVERILL.

Bowel diseases of little chickens are usually caused by damp and cold or feeding soft, sloppy food, especially if at all sour. Lice often cause the droopy chickens in July and August. Keep the chickens in a dry, warm place. Feed on oatmeal and wheat grits dry. Broken rice is also good, also millet seed. Keep them free from lice by using lice powder on the chickens and hens.—Ed.

Management of Grass Crops.

I have a field which I sowed last spring in tall meadow cat, red top and orchard grass. The weeds took possession of it, and I thought my grass was dead, but I find I have a perfect stand, but the weeds are still on the field about four feet high. Please publish in your February number advice as to what to do with them. I have thought I would mow them and rake them off and give the grass a top dressing of guano. I want to cut the grass and then graze it, hoping that you may be able to tell me what to do.

Isle of Wight Co., Va.

E. A. CLEMENTS.

Mow the weeds at once and take them off, shaking as little as possible, so as to avoid spreading the seed. They ought to have been cut off before they seeded. Top dress with 75 to 100 pounds of nitrate of soda to the acre as soon as the grass begins to grow freely.—Ed.

Japan Clover.

Can you inform your readers of the best mode of getting rid of the small Japanese clover. In this county it has taken possession of the grazing fields, and is choking out the blue grass—in fact, all other grasses. This is naturally a fine blue grass country. If cared for by not overstocking and occasional top dressing of the poorer places, it is the most profitable capital that the farmer has.

The Agricultural Department writes me that the only way is to plow it up. Now, I have good fields that have not

been broken since 1865 and 1867. I do not want to break them up. They are the most profitable fields I have. Can you help us?

N.

Fauquier Co., Va.

We know of no way to get rid of Japan clover, except by plowing it up. We doubt, however, very much whether it is wisdom to endeavor to get rid of it. We know thousands of people who would be delighted to have it on their farms. The late A. P. Rowe, of Fredericksburg, who was one of the first farmers in the State to grow Japan clover, told us that if he could not get seed for less than \$25 per bushel, he would willingly give that for it to secure a stand on his farm, if he had not got one. He had found it the most valuable pasture he had ever had. You are the first person who has ever complained to us about its being liable to run out blue grass or any other grass except broom sedge, and people are generally very glad to have broom sedge run out with anything.—Ed.

Acid Phosphate in Clover.

1. What will be the result of sowing (broadcast) acid phosphate on German clover next month or by March 15th? Will it add much to the growth of the clover? And how will the acid phosphate act on the tobacco crop that will follow the clover? I want to follow the clover for tobacco as soon as clover comes in bloom. What quantity of acid phosphate would you advise me to use? Most of the clover has been top dressed with manure. Do you think it would be better to wait later and top dress with nitrate of soda? If so, what quantity of it should I sow to the acre?

2. Also give remedy for lampas in horse. Would you advise to cut or burn them?

S. P. SPAIN.

Dinwiddie Co., Va.

1. The broadcast sowing of acid phosphate will have little or no effect upon the clover. Of course, the acid phosphate would be there ready to help the tobacco crop and phosphoric acid is needed for that crop, though not in excessive quantity. A top dressing of nitrate of soda, 75 to 100 pounds to the acre, would help the crimson clover more than anything you could apply.

2. Do not burn the lampas. If the swelling is very large and interferes with the horse's eating, it may be lanced, but this is very rarely necessary. Wash the mouth out frequently with strong alum water. Burning is a very cruel and unnecessary torture.—Ed.

Alfalfa.

I seeded one acre of alfalfa the 20th of August, 1904. Before plowing my land I put a covering of stable manure from my horse stables, fifteen bushels of slacked lime and two sacks of high grade guano. Turned this under with two-horse plow, followed this with a disk harrow, lastly with a spiked harrow; this put the land in excellent condition. I sowed 25 pounds of seed to the acre. The department of Agriculture at Washington, D. C., sent me material to inoculate same with. I have a good stand. The middle of November it was 12 to 14 inches high, and is looking well now. I want to know what is best to do next for it. Should it have been cut last fall, when four or five inches high and left as mulch?

Sampson Co., N. C.

J. R. HART.

The alfalfa should have been cut in the fall before it made the great growth you describe. It would have been better to have clipped it when about six inches high. As soon as the weather becomes sufficiently warm for the crop to commence growing again, run the mower over, rake up and take off the clippings. It will be well to repeat this again when the crop has made a growth of five to six

inches, leaving the clippings as a mulch. Later in the season you may cut the crop twice for hay, then clip when tall enough and leave as a mulch for the winter.—Eo.

Grass Seeding.

On my river low ground I wish to sow considerable acreage to timothy just as soon as it is practicable to do so. Several acres of this land which it is desired to seed to grass at once has not been in cultivation for a number of years, some of it was planted to corn two years ago, and a portion was planted to corn last year. During the winter months all of these lands have been used for pasture, and last year a ten acre field was grazed all summer by cattle. The seedings of grass which I propose will not be done with the view of making permanent meadows, but the fields will be used both for pasture and meadow in rotation, so that every fourth year one grass field may be planted to corn and then reseeded to grass. My own judgment is to prepare and plant the aforesaid lands to some early maturing corn, give a clean, level cultivation, cut and shock in very wide rows, and then plow the land deep, turning under the corn stubble, then drag down fine and sow. Later on get corn and fodder out of field as time and opportunity permits. The narrow strips of land through the field occupied by the shocks may be put in grass later or the following spring.

Now will you, or some of your readers who have had experience along this line, kindly advise me, through the columns of the *PLANTER*, how best to proceed? Also if it would be advisable to sow a mixture of timothy and red top?

JORDAN B. WELLS.

Mecklenburg Co., Va.

The method you propose seems to be a proper one, and should give you good stands of grass, if the land is in good order. Take care to prepare the land well and get the grass seed sown not later than September, if possible. Sow no grain with it. The shock rows can be seeded in February or March following. Whilst many people advise the sowing of timothy and red top together, if the crop is intended for market, we would always sow timothy alone, as the top price is always gotten for clean timothy, whilst mixed hay sells usually for \$2 or \$3 per ton less. If to be consumed at home, mixed hay will be better for the stock. Timothy alone will not make a good pasture field, therefore in your case may not be so advisable unless you could reserve it simply for a meadow. Timothy will not bear grazing. See our article on Work for the Month as to grass seeding.—Eo.

Corn Stalks.

The best method of handling corn stalks is to take a long pole, the longer the better, hitch a horse to each end and drag over the corn rows. If the ground is frozen so much the better. When ready to plow put jointer on the plow. The jointer will put every corn stalk in the furrow.

Henrico Co., Va.

J. A. JOHN.

Grass for Pasture.

What mixture of grain and grasses would you advise sowing either in February or March for fattening cattle during the summer? The land is sandy, with clay subsoil, has been in cultivation two years—corn and peas—raised a good crop of each last year. I consider this lot good land, and do not expect to use any fertilizer.

Mecklenburg Co., Va.

W. H. PETTUS.

You can sow no mixture of grain or grass in February or March which will be suitable for grazing during the coming summer. No grass sod ought to be grazed for twelve months after seeding. The best thing we could suggest would be to seed Hairy Vetch and oats in February or

March, which would probably give you as much grazing as anything we can suggest during the summer, and follow this with Crimson clover and a mixture of wheat, oats and rye for winter cover and spring grazing.—Eo.

Irish Potatoes in August.

Will you please give me your valuable suggestions on the following: Can I plant Irish potatoes in this section so that they will mature about the middle of August? Supposing that I can, I would like to know the best kind for the purpose; also the best time for planting the same, and where I might obtain the seed?

GEORGE L. MOORE, JR.

Accomac Co., Va.

Yes. By planting any of the second early varieties like Beauty of Hebron, Burbank, Carmen No. 3 in March or April, you should have potatoes ready in August. Possibly you may get from seedsmen advertising in this issue particulars of one or two other varieties suitable for planting this crop.—Eo.

Setting an Orchard.

Kindly advise me, through your columns, the best season to set out an orchard. The distance to set trees, apples, peaches, pears and cherries, and if they should be set the same distance?

G. L. S.

Culpeper Co., Va.

We always prefer to set out an orchard in the South in the fall, as the trees have a better chance to get hold of the soil at this season than in the spring, when the hot weather soon begins to affect them. Of course, many orchards are set out in the spring. The earlier this is done, the better chance they will have of growing. The usual distance to set out apple trees is from 30 to 40 feet each way. Some orchardists prefer to plant peaches in between the apples, thus making the rows 15 to 20 feet apart. They then take out the peaches when they begin to interfere with the growth of the apple trees, securing in this way a few crops of peaches before the apples begin to bear fully.

Pears and cherries may be set closer than apples, as they usually grow more erect. If peaches alone are planted, they may be put out 20 to 25 feet apart. See that the trees are set in perfectly straight rows each way, so that they can be cultivated without difficulty. Open the holes deep enough to allow the trees to be set a little deeper than they stood in the nursery rows. Make the holes large enough to spread out the roots. Do not put any manure or fertilizer in the holes. Break the bottom soil loose, set the tree in the centre, and put in the top soil on the roots and make them firm. Mulch on the top after the holes are filled with farmyard manure.—Eo.

Alfalfa—Grass Seeding.

1. Could I secure a stand of alfalfa on land which is a sandy loam clear of weeds? Grew 65 bushels White Dent corn per acre in 1904; now in wheat. Should I sow the seed on the wheat, harrow and then roll?

2. I have 40 acres I want to sow to grass with oats in the spring. I have red clover, timothy, red top, orchard and blue grass seed. Would you sow them separate or mix them, and in what proportion?

3. Where can I purchase Cocke's Prolific corn?

Scott Co., Va.

SUBSCRIBER.

1. When the wheat crop has been harvested, plow the land and put on a dressing of 10 to 15 bushels of lime to the acre, then work fine and allow the weeds to sprout. Work again and continue this at intervals till August, so

that the land will be freed from weeds. In August put on 400 pounds of bone meal to the acre, obtain from Washington the necessary alfalfa bacteria, spread on the land or inoculate the seed, and sow the alfalfa at the rate of 25 to 30 pounds to the acre. If the land is dry, roll after the seeding.

2. Mix the grass seeds you have named, except the clover, using about half a gallon of timothy seed to the acre, making up the rest of the mixture with red top, orchard and blue grass in equal parts by measure. Sow about five or six pounds of red clover after grass seed has been sown. In the article, Work for the Month, in this issue, you will find our advice on the seeding of grass.

3. You can get Cocke's Prolific seed from the Southern seedsmen advertising in this issue.

Apple Growing.

Please inform me whether the Johnson's Winter apple is the same as the Baldwin apple, as I never see anything said about the former apple? On what kind of soil does the Johnson's Winter apple do the best? Is it a very hardy and thrifty tree to grow?

W. R. McCLANAHAN.

Johnson's Winter apple is not the same as the Baldwin. Johnson's Fine Winter is the same apple as the York Imperial, and is grown successfully in many sections of the South, especially in this State, in the Valley of Virginia, on the limestone soil. In that section the apple is hardy and thrifty, but in some parts of Piedmont, whilst hardy, it does not appear to bear well.—Ed.

Planting Apple Seeds.

I wish to plant some apple seed for stocks for grafting. Please inform me in next number of THE PLANTER when is the right time to plant them.

SUBSCRIBER.

Apple seeds should be sown at once. If we have a late frost, they may be killed, but this is a risk which you will have to run. The nurserymen usually seed them a little later than this on iced material, thus keeping back germination till danger of frost is passed.—Ed.

Fattening Old Cows—Feeding Meal to Hogs—Dehorning.

Please give in next issue the most practical way to fatten old cows for beef at this season. What ration and quantity, both grain and hay? If better to keep confined or allow to walk about, do they need water more than once a day? What tonic, if any, should be used?

2. Does it pay to feed young hogs meal to fatten them, and should they have as much as they will eat?

3. Give more information as to sawing off cows' horns, kind of saw to use, and how close to head.

Mecklenburg Co., Va.

C. B. CROWDER.

1. Feeding old cows is a very unprofitable business at the best. They make practically very slow improvement on any ration that may be given to them. Keep them in a warm stable and feed a mixed grain ration, corn meal, cotton seed meal and ground oats, using equal parts by measure of ground oats and corn meal, and two pounds of cotton seed meal per day at first, to be increased by degrees to four pounds, giving them all the hay they will eat. They are better watered twice a day.

2. In experiments made in feeding hogs it has been demonstrated that there is very little difference in feeding whole grain or ground meal. We think perhaps there is some slight advantage in favor of the meal. When the cost

of grinding is taken into account, there is very little difference in the profit.

3. The horns should be cut off as close to the skull as possible. This may be done either with dehorning clippers, which are advertised in this issue, or with a saw.—Ed.

Preparation for Grass and Alfalfa.

Please tell me what treatment to give a piece of land for a good grass crop? Last year the land, a hard baked red clay, gave a fair crop of cow peas, following a rye stubble, which was sown after a crop of sorghum and peas. All crops were sown with a heavy application of grain fertilizers, but now the land seems little better than at first. It was broken up fairly well in October and sown back to rye, which came up indifferently after our recent snow. Would you advise leaving the rye, say two-thirds of a stand, or would you plow early as possible and put back in peas? My idea is to sow in grass as soon as possible. Advise as to use of lime on this land, and when to sow grass? On some of the land I also wish to sow a small patch of alfalfa. The land is very "lifeless" on account of too wet plowing and was always in either tobacco or corn before I bought it. I could secure a good dressing of stable manure comparatively cheap if you think it would benefit. Would subsoiling be of any advantage to this land prior to sowing in grass?

Advise as to value of bone meal to use as a top dressing for a lawn at once. Grass has stood ten years, and is above average in vitality yet. Would the bone meal be rapid in action—enough to benefit the grass this summer?

Amherst Co., Va.

R. J. N. Cox.

In this issue in our article on Work for the Month will be found our advice as to the seeding of grass crops. We think your failure in the improvement of your land lies in not giving the cow peas sufficient help in the way of acid phosphate and potash. To insure a heavy crop, you should have one or two crops of cow peas turned under after the vines have died down in the fall and in the winter instead of rye, there should be sown a mixture of crimson clover, rye, oats and wheat. This will insure a second improving crop. We would advise you now to plow the indifferent stand of rye down and to apply 25 bushels of lime to the acre immediately after plowing and to harrow in lightly. In May apply 300 pounds of acid phosphate and 50 pounds of muriate of potash to the acre and sow cow peas again. Cut this crop for hay in August, prepare the land well, give a dressing of 300 pounds of bone meal to the acre, and seed with the grass mixture advised in our article on Work for the Month, getting this in by September, if possible. If you have stable manure apply this also.

We do not think you would succeed in growing alfalfa on this lifeless land until you have sowed it in peas and crimson clover mixture for a year or two. We would not recommend you to attempt a crop for a year or two. We think subsoiling would help your land very much. This should be done at once. Bone meal will help your lawn more than anything else as a top dressing. Rake the lawn over well, so as to loosen the soil somewhat and use bone meal at the rate of 400 or 500 pounds to the acre. You will see the effect of the bone meal this summer.—Ed.

Fertilizer for Blackberries and Strawberries—Cow Peas for the North—Also Clover.

1. What kind of chemicals ought I to use to increase the yield of the Wilson blackberries. My land is partly sandy clay loam?

2. How to improve my land for strawberries? Would

you advise cow peas one season and plant strawberries the next? or would you advise clover?

3. What cow pea do you advise for this section of the country?

4. What clover, red or crimson?

New Jersey.

CHAS. A. UMOSSELLE.

1. All the berries and fruits are greatly helped by liberal fertilization with potash. They require some phosphoric acid as well. Probably the application of 300 or 400 pounds of acid phosphate and 100 pounds of muriate of potash to the acre would help the blackberries very considerably.

2. The growing of either cow peas or clover will quickly improve your land for strawberries. This crop should be helped with some acid phosphate—say 300 or 400 pounds to the acre, and the strawberries should have liberal fertilization with muriate of potash well mixed into the soil before setting out the plants.

3. The New Era cow pea seems to be the one best adapted for growing near the northern limit of the production of this crop. It matures much more quickly than the other varieties.

4. Crimson clover is only an annual and completes its growth by May or June, whilst red clover is practically a biennial. For quick improvement we would seed the crimson clover in the fall, and then follow with the cow peas in the spring, thus getting two crops off the land in the same time that it requires to produce one crop of red clover, whilst improving the land more thoroughly. You should sow the crimson clover early in the fall, say August, and it is better to seed a mixture of rye, oats and wheat with it and thus ensure a cover for the land in the winter.—Ed.

Asparagus Bed.

Please give me the best method of making an asparagus bed.

THOS. M. CLARKE.

Campbell Co., Va.

Plow the bed as deeply as you possibly can by running the plow two or three times in every furrow, throw out the top soil on to one side of the bed and the bottom soil on to the other. When you have gotten it a foot or more deep, then break the bottom soil again and spread in it some of the top soil—say two or three inches deep—and in this soil plant the asparagus roots or sow the seed. If seed is planted, it will require afterwards to be thinned out, so as to leave the plants 18 inches apart. Cover with two or three inches of top soil and leave level. Keep down the weeds by cultivation during the summer. In the fall cut off the stalks and trash and cover with six inches of good stable manure. The rows of asparagus planted in this way should be about four feet apart, thus leaving ample soil between the rows to bed on to the top of the plants for blanching the asparagus. The bottom soil thrown out of the rows should be spread over the rest of the field. For subsequent management of bed see "Work for the Month" in Garden Department.—Ed.

Plow to Use.

What is the best plow to use to turn a fine clay soil? All I have used the soil will not slip. I have used Dixie, Champion and Oliver Chilled. I also have a disc plow, but find it too much work for two horses.

P. H. BURTON.

King and Queen Co., Va.

Try the Syracuse plow. We have usually found the

Oliver Chill to be a good plow, yet as you have tried it and are not satisfied with it, make the change suggested. We would like to see the Disc plow more commonly used. It needs plenty of power, but does fine work, and, in our opinion, is the coming plow.—Ed.

Lawn Making—Canada Wood Ashes—Pruning Trees.

1. My front yard has a poor stand of grass, and I want to plow it up and sow in fine lawn grass this spring. The soil is a light sand, and in a medium state of fertility. I have been advised to use Canada unleached hard wood ashes. Would you advise this? I want a nice lawn. Please advise me the best way to get it.

2. Would you advise using Canada ashes in orchard with cow peas?

3. When is best time to prune apple and pear trees?

Essex Co., Va.

I. W. H.

1. After plowing the lawn, apply a dressing of lime at the rate of 20 bushels to the acre and harrow in. This should be done at once. Canada wood ashes make an excellent fertilizer, but should be supplemented with bone meal and well rotted farmyard manure, in order to make a complete fertilizer. Use the bone meal at the rate of 400 pounds to the acre. Work all this fertilizer well into the land in March, make a fine seed bed, then seed with mixed lawn grass. After the grass has commenced to grow freely, give a top dressing of 75 pounds to 100 pounds to the acre of nitrate of soda.

2. Canada wood ashes are an excellent fertilizer for orchards, but to insure a good growth of cow peas, should be supplemented with 300 or 400 pounds to the acre of acid phosphate.

3. Apple and pear trees should be pruned during the winter months when dormant. Much pruning with the knife may be avoided by pinching out the buds of branches, starting where not wanted, during the summer.—Ed.

Sow Dying After Farrowing.

I had the misfortune to lose a fine brood sow the second day after she had pigs. She had cleaned nicely. At 12 o'clock that night I went back again to feed her and found her in a stupor and would not get up to eat. Next morning was dead. Her pig bed had come down. Do you suppose this was due to my feeding at 12 o'clock?

Lincoln Co., N. C.

M. E. CANSLER.

We do not think the feeding of the sow at the time named had anything to do with her death. The falling of the womb arose from causes other than this, probably overstraining at farrowing, and was the cause no doubt of death. It is not well, however, to feed a sow heavily for two or three days after farrowing. She should have little corn and only sloppy food and fresh water till she has resumed her normal condition.—Ed.

First Litter of Pigs.

Is there any reason in nature why a young sow's first farrow of pigs should not be as healthy and vigorous and develop as well as after broods would.

Fluvanna Co., Va.

H. E. WOOD.

The reason why pigs from a first litter are not usually advised for keeping for breeding purposes is that usually they are smaller and not so strongly developed as from later litters. They may be as healthy and as vigorous as from later litters, but this is not usually the case.—Ed.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

Though it is too early yet to plant any crops in the garden or truck field, except in Tidewater Virginia and Eastern North and South Carolina, where English peas and Irish potatoes may be planted the last half of the month, if the land is dry enough to work freely, yet there is plenty of work which requires to be done in order that the crops may be got in on time. As soon as the land is dry enough to plow, the teams should be got to work breaking and cultivating it, so that the wind and sun may penetrate and warm and mellow it. Deep plowing and frequent cultivation are essential to fitting the land for all vegetable crops. Compost heaps should be spread on the land, and there be supplemented by liberal applications of acid phosphate and potash, which may be safely applied along with the compost as they will not leach out of the soil, but will be ready to give up their plant food to the crop when starting to grow. To successfully produce vegetable crops of all kind plant food must be abundant in the soil and in a quickly available form. Where the product, for which the crop is grown is seed, then phosphoric acid is called for especially, where the product desired is a root or tuber, potash is especially needed and where the leaf is the product desired, nitrogen is in the greatest demand. It is very important also to have the soil well filled with vegetable matter and hence the importance of using farm-yard manure freely. This not only supplies the soil with humus, but with microbic life upon which largely depends the availability of the different forms of plant food in the soil. Where lime has not been applied to the land within the last year or two an application of 15 or 20 bushels to the acre at the time of first plowing and before the application of any fertilizer will usually be found to be attended with much advantage. It tends to keep the soil sweet and slightly alkaline, and so conducive to the growth of microbic life. Very few of the mixed commercial fertilizers are rich enough in potash and nitrogen to supply the needs of vegetable crops and it is therefore advisable to mix the proper ingredients at home to make what the crop calls for. We give the following formulas for a few of the leading crops:

For Irish Potatoes—Nitrate of soda, 300 pounds; cotton-seed meal, 600 pounds; acid phosphate, 800 pounds; muriate of potash, 300 pounds, to make a ton. Apply at the rate of from 500 to 1,000 pounds to the acre in addition to compost.

For Beets and Lettuce—200 pounds nitrate of soda, 800 pounds cotton-seed meal, 600 pounds acid phosphate, 300 pounds muriate of potash. Apply at the rate of 500 pounds to the acre in addition to compost.

For Cabbage, Cucumbers, Melons and Cantaloupes—300 pounds nitrate of soda, 700 pounds cotton-seed meal, 750 pounds acid phosphate, 250 pounds muriate of potash. Apply at the before mentioned rate.

For Asparagus—200 pounds nitrate of soda, 700 pounds cotton-seed meal, 800 pounds acid phosphate, 300 pounds muriate of potash. Apply 800 pounds to the acre.

For Tomatoes and Eggplant—200 pounds nitrate of soda, 700 pounds cotton-seed meal, 840 pounds acid phosphate, 260 pounds muriate of Potash. Apply 500 pounds to the acre.

For Onions—200 pounds nitrate of soda, 750 pounds of cotton-seed meal, 750 pounds acid phosphate, 300 pounds of muriate of potash.

For Sweet Potatoes—100 pounds nitrate of soda, 500 pounds cotton-seed meal, 1,100 pounds acid phosphate, 300 pounds muriate of potash. Apply 500 pounds to the acre.

For Beans and Peas—100 pounds nitrate of soda, 450 pounds cotton-seed meal, 1,200 pounds acid phosphate, 250 pounds muriate of potash.

Work over the asparagus bed, and cover with well-rotted manure, and then cover this with 10 to 12 inches of good soil.

Small patches of lettuce, radish and other spring salads may be sown towards the end of the month in places where they can be protected in case of frost.

The setting out of strawberry plants should be completed as soon as the land is fit to work.

STRAWBERRIES IN THE FALL.

Seeing the enquiries in the January issue, as to how to get ripe strawberries in the fall, our friend, Mr. R. Powell Dunn, of Brookhill, Va., write us that he was in England in the fall of 1903, and at a place near Wolverhampton, in one of the midland counties of England, had ripe strawberries plucked from a bed in the open air on October 29th—the plants were loaded with ripe, partly ripe and green

berries. The owner of the bed told him that he had had an abundance of fruit from the bed all summer. The variety is called "Perpetual bearing," as a general name. There are three specially named varieties of this berry, of which, St. Antonio de Padone is the best. The variety is a French introduction, and is said, to be one of the French strawberries crossed on the wild Alpine berry. The variety is a new introduction into England, and so far as Mr. Dunn is able to ascertain, is unknown in this country. He has tried to get the plants here, but failed. It should be worth the while of some of our growers to test the variety here by importing the plants from France or England.

ORCHARD CULTURE, NORTH AND SOUTH.

Editor Southern Planter:

The recent meeting of the Virginia State Horticultural Society at Front Royal, Va., was one of the most interesting conferences of intelligent fruit growers we have ever attended. The members present were wide-awake men; who are studying fruit growing scientifically, and are adding to their own practical experience the results worked out at the Experiment Stations. Prof. Waite, of the Department of Agriculture in Washington, is making a success in growing fruit on an old run-down farm in Maryland, near the city of Washington. Prof. Waite finds that the sweet potato on his light soil is one of the best best crops to grow among orchard trees. His success with the crop through liberal fertilization, shows that the old idea that the sweet potato crop does not thrive with heavy fertilization, is all wrong. He uses well-rotted compost of city manure and soil liberally in the furrows, and finds that in addition to this there is need for liberal applications of acid phosphate and potash for the best results. The same thing has been found by the lettuce growers in the South Atlantic States, who have long ago found that the best winter lettuce can not be grown with stable manure alone nor with fertilizers alone, but that both are needed for the best results. The proper pruning of orchard trees brought out an interesting discussion, and we were pleased to note that tall headed orchard trees no longer are advocated. Mr. Hale, of Connecticut, who is the largest peach grower both in Connecticut and Georgia, and probably the largest peach grower in the country, and hence in the world, declared that he never could see any use for a trunk of a peach tree more than enough to start the head. He heads all his trees about eight inches from

the ground, and told of a visitor, sitting on the ground by a tree and gathering half the crop on the tree without getting on his feet. In all his more than 2,000 acres of peaches, he has no step ladders for gathering the crop. In the discussion on fertilizers, Mr. Hale declared that in the light soil of his Georgia orchards, a complete fertilizer of high grade is essential. He uses heavy applications annually of a fertilizer containing about 3 per cent. of nitrogen, 8 per cent. of phosphoric acid, and 10 per cent. of potash. On the heavier soil of his Connecticut orchards, he varies this to some extent. The general opinion of the fruit growers present seemed to be that a complete fertilizer is best for young trees in inducing a rapid growth. The Virginia growers generally use corn as a crop among their young trees, a practice that did not suit Mr. Hale, who makes the crop of Rocky Ford melons profitable among his Georgia peach trees. Soil like that of the Georgia orchards gives up potash rapidly to the crops, and requires heavier potash fertilization than the heavy loam soils further North. The only idea of the older orchardists who advised tall tree trunks seemed to be that such trees allowed cultivation under them, but orchardists are now-a-days learning that this is not needed, and that the roots of a tree that are engaged in getting food from the soil, are all out as far and further than the limbs extend, and that if cultivation reaches that far, it is all that is needed. One man asked Mr. Hale if it was wise to plow deeply, and prune the roots of the trees. He replied that this did not come in under the head of pruning, but of butchery, and that if in any case a root needed cutting, it should be done with a knife. It was evident too, that nurserymen and orchardists are coming to the opinion that close pruning of roots at transplanting a tree is valuable as new fibres start more easily from a clean cut surface than from a dried up fibre. There was some vigorous advocacy of the Stringfellow method of cutting all the roots off to a stub, but the general impression seemed to be that this is too radical. Sod culture and mulching with all the grass that grows on the land helped by liberal fertilization, seemed to be gaining advocates, the idea being to retain moisture for the solution of the fertilizers applied. But whatever the method of culture, all admitted the need of liberal feeding of the trees, especially with phosphates and potash.

W. F. MASSEY.

Mention THE PLANTER in corresponding.

MEETING OF THE VIRGINIA FRUIT GROWERS.

The annual meeting of the Virginia State Horticultural Society was held in Front Royal, Va., on the 13th and 14th of December.

This was one of the most successful meetings in the history of the Society. A number of prominent, practical fruit growers and scientific experts delivered addresses, and there was a lively discussion on the various subjects presented by the members.

A number of prominent, practical fruit growers and scientific experts delivered addresses, and there was a lively discussion on the various subjects presented by the members.

A cordial welcome was given by the Hon. Walter Richards, to which the Hon. George E. Murrell responded in behalf of the Society. The president, Mr. Samuel B. Woods, then delivered the annual address.

Other speakers were as follows: Hon. S. L. Lupton, Winchester, Va., Report of Secretary and Treasurer, and Beginning an Orchard; Prof. H. L. Price, Virginia Experiment Station, Pruning Orchard Trees; Prof. L. S. Corbett, U. S. Department of Agriculture, Beautifying Country Homes; Prof. M. B. Waite, U. S. Department of Agriculture, Nurse and Cover Crops for the Orchard (illustrated with lantern slides); H. W. Collingwood, Editor Rural New Yorker, Hope Farm "Problems and Products" (illustrated with slides), and Growing an Orchard by the Sod and Mulch Method; J. H. Hale, President American Pomological Society, Growing and Marketing Peaches; Prof. George E. Husman, U. S. Department of Agriculture, Thoughts on Viticulture; H. W. Miller, Paw Paw, W. Va., Use of Fertilizer in the Orchard; Prof. W. F. Massey, Raleigh, N. C., Horticulture in North Carolina.

Besides the above papers and addresses, there were a number of reports from committees which greatly added to the value of the Convention. The discussion at every point was lively and full of interest, and set forth the fact that the fruit growers of Virginia are well informed in regard to the latest and best methods of technical fruit growing. This wholesome condition of affairs is largely due to the efforts of the Virginia State Horticultural Society, which is the most active agency in the State for the promotion of horticulture and fruit growing.

The full report of this meeting will be available in a short while, and no fruit grower should fail to secure a copy. These reports are not for sale, but may be secured by any person who cares to become a member of the Society, the annual membership fee being only one dollar. To become a mem-

ber it is only necessary to forward name and address with this amount to Hon. S. L. Lupton, Winchester, Va., who is the Secretary and Treasurer for the ensuing year.

The election of officers resulted as follows: Samuel B. Woods, Charlottesville, President; S. L. Lupton, Winchester, Secretary and Treasurer; H. L. Price, Blacksburg, Recording Secretary.

CELERY GROWING IN THE SOUTH.

Editor Southern Planter:

My method of growing Celery since I have been in Virginia is as follows: Sow seed in early spring when there is plenty of moisture in the ground, as it takes the seed from three to six weeks to come up. These are the dates, I have sown since I have been in Virginia, November 6, 1902, March 13, 1903, April 1, 1904. I sow in some good rich mellow soil, and it is a good plan to burn the ground a few days before sowing, the same as for a tobacco bed. When the young plants come up, I work very shallow to kill all weed and grass and to keep the young plants growing until time to set in the field. For the young plants, I select a piece of low moist land, plow well and deep, about six to nine inches, and thoroughly work it over from six to twelve times, and then open my rows from four to six feet apart, very shallow, and set the plants from eight to sixteen inches in the row. These are the dates I have set out in the last three years: June 26th to July 4, 1902, June 20th to July 6, 1903, July 1, 1904. If one chooses, a row of snap beans may be planted between the celery rows.

I work just as I would any other crop by running the fine-tooth cultivator through the rows once a week to retain moisture, but do not expect much growth until the cool nights set in. Just as soon as the celery commences to grow rapidly, I bring the dirt to it, about August 23d. I take the celery out of the field about November 10th, and use one of my cold frames, I throw the dirt all out and then pack my celery as close as I can get it by putting a little dirt on the root. When this is done, I get pine straw or some fine hay and cover it entirely up, and then put the glass over it and stretch a sheet over the glass to keep the sun and light from it. I leave it this way about two weeks until it is thoroughly bleached, then it is ready to sell. If the weather should get too cold and threaten frost, it is a good plan to put fresh manure over the glass. I have grown White Plume celery since I came here that measured over two feet.

C. F. MASTERSON.

Live Stock and Dairy.

FARM BUTTER MAKING.

Editor Southern Planter:

On page 31 of the Southern Planter for January, Prof. R. H. Price asks me for some information relative to dairy machinery. He seems to take exception to the following statement made in my former communication: "On the score of education and lack of facilities for the work, no excuse is available for the inferior quality of butter made on the average farm." After due reflection, it seems to me, that the statement is just, for a farmer can obtain all the information needed on how to manufacture a "gilt-edge quality of butter at the cost of a few cents. You may well ask how he shall do this. Simply by writing a card or a letter to the Experiment Station. We have not published a special bulletin on the manipulation of milk for the production of a high quality of butter, but letters of inquiry on this subject will be welcome and cheerfully answered. Then, there has been a large amount of information published on butter making from time to time in the bulletins of the United States Department of Agriculture, which are available for the asking. Many of these papers have been prepared by thoroughly practical dairymen, and they are therefore applicable to farm conditions. It will take some study and experience to adapt them to the needs of individuals in special environments, but this can be done if a serious effort is made. You say this will require labor and expense, and so it will, but no good thing can be had for nothing, and one who is to become expert in the making of butter, whether trained in the school of experience or in a dairy school, must expect to labor hard and long for the information obtained.

Outside of the bulletins referred to there is not an agricultural paper in the country that does not give more or less attention to dairying, and I am sure that the Southern Planter would be glad to provide special information for dairymen through its columns on practically every subject. If you will allow me to say so, a great many farmers unfortunately do not take a good agricultural paper, and many of those who do fail to read it. They are constantly overlooking information which would be of direct value to them. I therefore feel that my statement was justified, for a farmer can obtain direct and reliable information on the subject of butter making at practically no cost to himself, either through the Station bulletins, his agricultural papers, or through direct inquiry to the officers of our State Experiment Station.

This information, of course, will not be as valuable, nor as readily appreciated as that derived from a course in a good dairy school, and therefore I believe that courses of practical instruction in farm butter making and other branches of dairying as well should be provided for in the State College of Agriculture. In the January issue of your paper, you were good enough to reproduce an excellent cut of the new agricultural building of the Virginia College of Agriculture, together with an article describing the same. Those who are interested in this matter will be glad to know that the whole basement of this building is to be devoted to dairy instruction; between 9,000 and 11,000 feet of space will be available for this purpose, and the facilities for dairy instruction will hardly be surpassed anywhere in this country. I can give Prof. Price very positive assurance on this point, unless the present plans and policy utterly fail. It is our intention as soon as this building is completed to offer short courses to the farmers of Virginia, not only in dairying, but in the feeding and management of live stock, and in practical facilities to do this work. I should like to say, however, that a dairy has been run in connection with the College for a number of years, and its work has been very successful, as many dairymen in the State who have been directly benefited by it will testify. Young men, or for that matter ladies, desiring instruction can obtain the same at the present time on making application to us, and it will cost them practically nothing, except their board and traveling expenses.

While ladies will be welcome to take the short course in dairying which we propose to offer, special courses will hardly be provided for them, for, in the first place, it is unnecessary, and in the second place, there is no demand for it. The writer built and organized a dairy school in another Southern State. This institution had excellent equipment and a staff of good instructors, and though ample provision was made for ladies, there were only two who ever took the course. In my judgment, it is all wrong to leave the dairy to the management of the ladies. In the first place, it is too laborious work for them; in the second place, it is entirely too important an industry to be given a back seat, as it were.

Farmers who wish to purchase separators or churns of good workmanship and made by reputable firms can easily obtain information bearing on these points by writing us. I do not blame a farmer for hesitating to buy a separator when he has never seen one

work, and does not understand how to handle and manipulate the machine. The agent, of course, is chiefly interested in selling the machine, and in getting away, and that is one reason why so many dairymen who have purchased separators have found them unsatisfactory. A farmer should hesitate about buying a machine until he has familiarized himself thoroughly with the situation and is prepared to buy intelligently. He should also remember that a separator, though of the best workmanship, is a comparatively delicate and complicated machine, and it can not be cuffed and kicked about like the old plow and still do good work. At the same time, if handled intelligently it will pay for its cost, where from eight to ten cows are kept in the course of a year, and it is not a difficult matter to manipulate a separator so that it will do perfect work. In an experience of some years, the writer has observed that comparatively few men have any taste for mechanics. This accounts in a large measure for the number of broken down agricultural machines one sees on every farm, representing in the aggregate an outlay of quite a few hundred of dollars to no purpose. The first thing necessary after purchasing a machine, therefore, is to study it so thoroughly as to become master of it; then there will be little difficulty experienced in handling it to a profitable advantage.

With regard to the best hand separator for use on the farm, permit me to say that there are several leading makes among which there is little to choose. I have seen as much difference between individual machines made by the same firm on a number of occasions as between machines made by different firms. Some of the separators now placed on the market are sold at a low price. These machines will do good work for a while. They are not strongly and substantially built, and the higher priced machine of standard make is the cheapest machine to buy in the long run. I have no hesitation in saying that the farmer who purchases a hand separator manufactured by the DeLaval Separator Co., New York, N. Y.; the Vermont Farm Machine Co., Belows Falls, Vt.; the Empire Cream Separator Co., Bloomfield, N. J.; or the National Cream Separator Co., Newark, N. J., will not make a mistake, provided he buys with the full guarantee of the company behind him. A good separator will cost anywhere from \$65 to \$100, depending on its capacity and the make. A \$10 separator in my judgment is \$10 thrown away.

There are probably more patents on churns than almost anything else recorded in the Government Patent Office. I have no way of knowing accurately,

but the great majority are certainly worthless. What is known as the barrel or box churn is not surpassed for farm purposes. The barrel churns are carried, as a rule, by every large hardware firm. They are small, compact and durable, and the price is moderate.

ANDREW M. SOULE.

DAIRYING IN VIRGINIA.

Editor Southern Planter:

Having read Mr. Price's article on "Farm Butter Making," thought perhaps my experience might help him. We began at the bottom in a small way, and earned the money to pay cash for all improvements before they were made. At first we set our milk in the cellar, then at the spring in running water, and after a few years, saw a friend with one cow buy and use a small hand separator. We concluded that as a matter of business, we must have one, and after careful study of the different catalogues, we bought the "Eclipse," sold by C. L. Chapman, Erie, Pa. The No. 1 size, with lower shaft extended for power, seemed likely to suit us, as we milk from three to five cows only. The capacity of that size is about 200 pounds of milk per hour, and it cost us about \$50 fitted for power or hand.

We bought it in January four years ago. We were doing our best with our milk at that time, but when we began to use the separator, we made from the same milk a gain of about 25 per cent. in butter. Our gain during the summer must be nearly 50 per cent., and as our butter brings us 25 cents per pound the year around, you can see it did not take us long to save enough to pay for our machine. As to the cheap water cooler tanks, they are not separators. Don't waste any money on them; rather sell a cow to buy a good separator and make enough extra butter to buy another cow again in a short time.

We use the common barrel churn, and don't think there is anything better made, and the price is reasonable; fifteen-gallon size, two to seven gallons of cream only, \$2.75.

We run our separator by a level tread horse power every morning, saving our night's milk over and warming it to 85 degrees and putting it through with the morning's milk, once a day. We fill two small silos of 45 ton capacity, using our three-horse power mounted gasoline engine for that work, and with our present outfit, feel that we are getting about all the butter from our milk, and with the ensilage and cotton seed meal, and plenty of good clover hay, we have cheap feed and good feed, so our cows are doing their part at a small outlay of cash for feed.

Surry Co., Va

O. D. BELDING.

The Poultry Yard.

POULTRY NOTES.

Editor Southern Planter:

With the beginning of each new year comes a vast army of beginners in poultry raising. Many young men, some older ones and some women, have read and are reading the well written and highly colored articles on poultry culture, written by men who probably do not own a single fowl, but who are able to show on paper enormous profits in this enterprise. To the man who has "lived with chickens" for many years much of this matter is ludicrous. Again, much of this matter is applicable to some sections of our great country, but wholly misleading for the South Atlantic States. In these notes I intend to give only such facts and information as I know from experience to be helpful.

First, as to breeds. This is largely a matter of taste. Almost any of the various breeds may be cared for in such a way as to make them fairly profitable. In fact, many of the common flocks of mongrel-bred fowls, can be made to yield a fair profit. I know, however, from many years of experience that pure-bred stock is much more satisfactory. If the aim is to produce eggs for market, then some of the smaller breeds will in most instances give best results. If for eggs and carcass or flesh, then some of the American breeds may possibly be preferable. For pounds of flesh in mature birds, such as many farmers sell, and for capons, the Asiatics will be satisfactory. My experience is largely with the egg producing breeds, as I believe, all things considered, they are the best money-makers. Next I will consider farm conditions for success. The land where houses and range or runs are located must be reasonably dry and well drained, and so located that it can be plowed conveniently. This should be done at least twice each year. The runs and range should be kept seeded to clover, rye, oats, wheat, millet, turnips, etc., so as to afford a continuous rotation of green crops. Where high-class eggs are wanted, I prefer the above crops as, I know by experience, that rape, cabbage or any member of the cabbage family will impart an objectionable taint to the eggs.

Shelter must be provided. This need not be expensive, but must afford ample room, sunshine, good ventilation and cleanliness. With free range, in Virginia, a house 10 feet wide and 100 feet long, with

muslin front, will house 500 birds, and can be built for less than \$100 cash outlay.

Care and feeding is the key to success. All breeding birds should be selected in January, and carefully mated. These should be given as much range as possible, and be fed liberally during this and next month. Hens and pullets not intended for breeding should now be laying well, and no males be allowed with them. I find a different ration and system of feeding necessary here from those used in the Northwest, our former home. I am feeding, with excellent results at present, whole oats in the litter in the morning, a mash composed of two parts shipstuf and one part bran (by weight), made into a crumbly mash with sweet skimmed milk at noon, and whole corn in the evening. I feed about six quarts shelled corn to 200 hens and pullets. Green cut bone is fed three to four times per week. Grit, oyster shell, and clean water is kept in the yard and house all the time. With this ration I am getting an egg yield of 60 to 70 per cent, at this writing, January 20th.

With reasonably good stock and a disposition to do the best we can, we can make February a profitable month, if we give our birds a dry, sunny, well ventilated house, a variety of food, keep them busy, feed meat or bone in some form, keep them clean and free from vermin, and feed corn sparingly. Hatching should begin this month.

Early hatched pullets will begin laying in August and September, and with good care, can be kept laying all winter. I prefer to hatch all my chicks in incubators and raise them in brooders. In this way I can hatch when I choose and as many as I want, and keep the hens at work laying eggs. I have 440 eggs hatching at present, which would require 300 broody biddies, and I have none, and may not have for weeks to come. Next month I will give some notes on incubation and feed and care of chicks. I invite practical questions for this department.

Virginia.

CAL. HUSSELMAN.

Cow peas for poultry were harvested after maturity, stored in dry lofts and thrown to the fowls in pens, where they were searched for during the day.

After a few days the egg supply visibly increased, and within a few weeks almost doubled that from an equal number of hens kept in separate quarters and fed on other grains.

The Horse.

DRAFT HORSES.

Editor Southern Planter:

I notice in the communication of John F. Lewis, headed "Draft Horse Breeding," he complains of the farmers buying stallions away from home instead of from dealers or breeders in their own State. I have looked through your advertising columns very carefully for the advertisements of draft horse breeders in Virginia, but have found not one; I have also looked through the advertising column of "The Breeders' Gazette," and have found none there. If there are in this State men engaged in breeding draft horses, in what paper or journal do they advertise?

AN INTERESTED FARMER.

Why don't the breeders advertise in *The Planter*? We are often asked where heavy horses can be found.

—Ed.

DRAFT HORSES IN VIRGINIA.

Editor Southern Planter:

The breeding of heavy draft horses, and the other breeds, such as those of the coach horse type is now becoming well established in the Old Dominion.

Many fine stallions are coming in almost monthly from the most prominent breeding and importing firms in the West, and are being distributed throughout the State.

Virginia farmers have found out that breeding scrub stock does not pay, and they are now devoting more time to the improved breeds, and scrub stock is no longer favored by Virginia farmers, and is rapidly disappearing. I herewith enclose a photograph of a



pure bred Percheron horse, which has recently been bought on the company plan by parties in this and the adjoining county for \$3,200.

The animal has the right conformation to breed drafters from, the sort that fetch such handsome

prices on the markets, for which there is a steady demand, and shortage in supply.

This horse was bred by the celebrated French breeder, Mr. Faillard, and was imported by the well-known firm of McLaughlin Bros., of Columbus, O.

The animal is three years old and weighs 1,750 pounds, and is claimed to be the finest specimen of the breed in the State.

LOUIS F. DILGER

Warren Co., Va.

The above cut is taken from the photograph sent Editor.

NOTES.

Capt. Edward R. Baird, of the Epping Forest Stud Farm, Occupacia, Essex county, Va., favors me with the following interesting information concerning his thoroughbreds: "Since I last wrote you I have added to my stud Lady Waterford, 5, by imp. Waterlevel, dam Gloworm, by Gabriel, and her brown filly, foal of 1904, by Kasson, also Prude, 3, by Prig, dam Evanescia, by imp. Deceiver. Of my brood mares imp. Pleasure, by Fortissime, dam Ma Beaute; Niole, by Eolus, dam Nita, by imp. Billet, and Missouri Girl, by Bubbler, dam Fiance, by imp. Mortemer, were bred in 1904 to Judge Morrow, and all appear to be in foal, as does Lady Waterford to imp. Aldine. Iron Prince, 3, by Chiswick, dam imp. Pleasure, is in the stable of T. Barnard Doswell at Bull field and promises well. I have two very promising yearlings in Moorcroft, chestnut colt, by Chiswick, dam Niole, and Half Moon, brown filly, by Kasson, dam Lady Waterford. The only yearling on the farm is Keystone, black colt, by Iron Grown, dam imp. Pleasure, and the youngster is certainly a fine specimen. Lotus Lily, brown filly, 3, by imp. Waterlevel, dam Evangeline Cisneros, by Eon, will be placed in training this spring.



Andrew Carnegie, 38961, the bay colt, 2, by Giles Mebane, 2.163, dam Virginia Menefee, 2.32, by Gregorian, 2.293, bred and owned by Mr. J. W. Menefee, Greensboro, N. C., is wintering in fine shape at River Falls Farm, Graham, N. C. This colt traces to rich ancestral lines, and high hopes are centered in his future. He is a trotter, and later on the youngster's speed will be developed, after which it is Mr. Menefee's intention to retire him permanently to the stud at River Falls. Giles Me-

bane, the sire of Andrew Carnegie, is not only a fast, handsome and richly bred horse himself, but he is a son of the famous John R. Gentry, 2.00 $\frac{1}{4}$, one of the grandest pacing stallions this country has ever seen. John R. Gentry was twice crowned king of pacers, and is now making a great name in the stud. Virginia Menefee, the dam of Andrew Carnegie, was a fast mare, but was retired before her speed limit was reached. She is now in the stud at River Falls Farm. Her sire, Gregorian, is siring speed, and is a full brother to the famous California sire, Dexter Prince. Andrew Carnegie has a bright future, and will be given a chance in the stud.



Among the mares booked to Kelly, 2.27, son of Electioneer and famous Esther, dam of Expressive, 3, 2.12 $\frac{1}{4}$, by Express, for the season of 1905, are Miss Bird, 2.32, trial 2.20 $\frac{1}{4}$, by Jay Bird, dam Fannie Swope, 2.30, by Young Jim, second dam the great brood mare Roan Fanny, dam of 5, by Mambrino King; Francis S. Dayton, 2.27 $\frac{3}{4}$, by Cadmus, Jr., 2.26, dam Daisy Dayton, dam of Lake Erie, 2.13 $\frac{1}{4}$, etc., by Bellfounder; Florence Miles, 2.21 $\frac{1}{4}$, by Prophet Wilkes, dam by Red Champion, and others with slower records.



In the pure bred hackney colt Harry Bassett, a black foaled March 30, 1903, T. P. Shelton, of Jetersville, Va., has a youngster of good form and handsome proportions. Harry Bassett was bred by Mr. Shelton. He was sired by imp. The Duke, dam Kate Shelton, by imp. Star of Mepal, second dam Bright Star, by Reality, E. H. S. B., 665. Harry Bassett's dam, Kate Shelton, the black daughter of Star of Mepal, is also owned by Mr. Shelton, and she is not only valuable as a producer, but a clever, prompt driver.



W. C. West, of Onancock, Va., for years past a breeder of trotters, has recently purchased the thoroughbred stallion Tom Kenney, and will, most likely, use him as a sire of hunters and jumpers. Tom Kenney is a bay horse, foaled 1898; bred in the Belle Meade Stud, Nashville, Tenn., and sired by Inspector B., dam Touch Not, by Tremont. Mr. West formerly owned the trotting sire Powell, by Wickliffe, and has bred among other good horses Lamp Girl, 2.09, holder of the record for Virginia bred trotters, and now owned in far-off Norway; Gold Burr, 2.13 $\frac{1}{4}$, and some more with slower marks.

Through an advertisement in the Planter, which attracted attention to the mare and brought forth a number of replies, I have sold to Mr. W. A. Biggs, of Isaac, Southampton county, Va., Flora McC., a rich chestnut in color, by Red Wilkes, dam Missie Wilkes, by William L., second dam the great brood mare, Fanny H., dam of Evangeline, 2.11 $\frac{1}{4}$, who sold for \$18,000; Edmonia, 2.14 $\frac{1}{4}$; Mocking Bird, 2.19 $\frac{1}{4}$; Delgate, 2.19 $\frac{1}{4}$, etc., by Red Wilkes. Flora McC., was sired by Red Wilkes, while her grand dam, Fanny H., is also a daughter of that great sire, which makes her inbred to that famous son of George Wilkes. She was bred in December, 1904, to Kelly, 2.27, and the resulting foal will carry a speed inheritance of a rare sort.



Capt. H. H. Williamson, of the Lukenback Transportation and Wrecking Company, Norfolk, Va., has a very handsome and promising colt in Whitby, Jr., 0897, a chestnut, 3, by Whitby, 2.18 $\frac{1}{4}$, dam Kitty B., 2.24 $\frac{1}{4}$, by Nutgold. He was bred by the late Thomas M. Hewitt, of Weyanoke, Va. With very little handling last season at two years old this colt trotted a half in 1.18, and could show quarters at a right much faster clip. Capt. Williamson will place Whitby, Jr., in training again this season, and looks for him to develop speed rapidly.



W. Otto Nolting, who takes an active part in the counsels of the Deep Run Hunt Club and rides regularly to hounds, has recently purchased a good looking Virginia bred brown gelding from parties in Clarke county, and is using him as a cross country horse.



W. Wilbur Osborne, breeder, owner and horse show patron, is wintering a strong stable of hunters and jumpers at Spring Fields Stock Farm, Gordonsville, Va. The season of 1904 was quite a satisfactory one with Mr. Osborne, and his horses carried off ribbons along the line of open air Virginia Shows, and also at Chicago, Richmond and other places. The stable at Springfields includes some eight or ten half and three-quarter bred hunters, and the thoroughbreds King B., brown horse, 6, by Kingston, dam Elsie B., Cedar Rapids, bay gelding, 4, by Handsome, dam Guile, Rockmart, black mare, 5, by Potomac, dam Brown Princess, and Black Socks, black mare, 4, 16 hands, by Rappallo, dam Fast Black.

BROAD ROCK.

Miscellaneous.

HEREFORDS AS "RUSTLERS."

Editor Southern Planter:

The following excerpt from a letter recently received from Mecklenburg county, Va., endorses my opinion of Herefords so emphatically that I think it well to let your readers have the benefit of it:

"Murray Boocock, Esq., Keswick, Va.:

"Dear Sir,—Your esteemed favor of the 14th is just to hand, and I wish to thank you very, very much.

"Your letter in regard to Herefords in Virginia is in perfect accord with my experience in the West. Out there the Hereford was my ideal cow, grand rustlers, much ahead of the Shorthorn and miles ahead of the Angus.

"You speak of the Hereford as the only breed that will stand the drouth of South Africa. I was at one time on a ranch in Colorado, and at some seasons, I am sure, parts of the range were at least ten miles from water, yet the Hereford was always in good condition. I was surprised to see in several agricultural papers, and in the SOUTHERN PLANTER articles representing the Angus as the best rustlers and better suited to Virginia grass. I could not understand this as Colorado is in the same latitude, and I could see no reason why they should be so different in different localities. Knowing the Herefords as an old established breed which reproduced like, I was at a loss. Where a man wants cheap beef, I regard the Hereford as above all others, not only as less expensive to raise, but as the very best. Should my letter help the Herefords in Virginia I will be indeed glad, for I believe they are the cows for this State.

"Yet some Angus breeders told me the Angus was the cow for this section. While thinking it over it came to me that the Angus breeders *thought* they were right, but the Hereford breeders *knew* they were right. When I do begin *you* will hear from me for bulls. I may make a trip to look over your cattle, as I am an old University of Virginia boy, and would like to visit the University again, but don't suppose any one now lives at the college who was there when I was a student."

It is a natural conclusion that the Herefords, which originated in the south of England, would be adapted to the South of the United States.

Their growing popularity in Virginia attests the fact of a wealth of flesh produced with the greatest economy. All of my Hereford cows were fat in

November after eight months of Albemarle grass without any other feed. MURRAY BOOCOCK.

Albemarle Co., Va.

TOBACCO GROWERS' CONVENTION.

Editor Southern Planter:

Having attended the Tobacco Growers' Convention of America, held in Lynchburg on the 29th November under the auspices of the American Society of Equity, I ask space to tell what that Society proposes to do and is now doing. This Society was started two years ago in Indiana by Mr. J. A. Everet, and is now spreading over this continent. I wish every farmer could have heard the distinguished Mr. Sherman, of Annapolis, Indiana, on that occasion. He will soon be again in this State. Farmers go and hear him. Farmers are the only ones not organized. All others are thoroughly organized, and this is the sole reason why we have been working so long and have but little for our labor. What we need is organization, and we can then do as Indiana and Kentucky are doing. Those States are now organized.

This Society only demands what is strictly right and just. We have now one lodge of the Society in this county (Powhatan). Lodges should be in every neighborhood and then we will be rewarded for our labor. This order is working against no one, but is only to help farmers. It furnishes the information we need. It keeps us posted on all the products of this and other countries, and will do for us what it has done in these other States. When this Order started wheat was selling at sixty and seventy cents. The lodges met and determined they could not raise wheat for less than one dollar, and it went up to that price at once, and this year they said wheat was worth one dollar and twenty cents and they got it, and so with eggs, butter, etc. Farmers organize at once and we will have good roads and good county administration. We pay the taxes and have nothing to say how the money goes. Let us come to the front where we fairly belong, and our country will once more bloom like the rose. I now feel like the day of prosperity is in sight. Do not delay organizing.

In this meeting at Lynchburg we had six live delegates from Kentucky, one from North Carolina and some fifty from Virginia. All tobacco growers. The price fixed for Kentucky dark tobacco was \$8 and \$12 for burley grown in the dark district. For Virginia dark the price was fixed at \$9.00 and \$12.00 for bright. This was the average. It was clearly proven it cost \$8.00 to raise tobacco and one dollar for the farmer was a reasonable reward for his labor.

Is it unjust to anyone that we as farmers should not fix the price on our products like all other business men? The merchant tells us what he will take for his goods, why can't we do the same? Let us act collectively, as these States have done. In the counties of Accomac and Northampton, Virginia, they have their produce exchange and are making all the money they want.

W. W. HOBSON.

Powhatan Co., Va.

DECEMBER WEATHER IN THE NORFOLK TRUCKING BELT.

Editor Southern Planter:

December, 1904, broke the record as regards snow. One year with another we have one snow storm of sufficient depth and size to justify the term "snow storm." This one storm generally comes late in January or early in February. This year we got a snow fall in December of between two and three inches in depth; and as the mountains of Virginia and North Carolina, and all the country between us and the mountains, was covered with the fleecy mantle to the depth of three to fifteen inches, we were caught in bad company. Our snow fell in the mud, at the tail end of a rain and stuck tightly and remained several days. It is all gone now, however, and the weather is regaining its usual equilibrium.

Our coldest was one day at twenty above, on the 12th of December. Points one hundred miles to the westward of Norfolk reported ten above, or ten degrees colder than at Norfolk. Ice formed here one-fourth to one-half inch in thickness, and the greatest depth of snow was three inches.

A few miles to the westward, say twenty-five miles, sleet covered everything. On the other hand, while we had twenty degrees above, and three inches of snow, fifteen miles to the eastward towards the sea, there was less than one inch of snow, and no ice at all to speak of.

This exemption, from damaging frosts, is what makes our trucking lands very valuable. There has not been a day, so far this winter, when the weather has prevented the cutting, barrelling and shipping of kale, spinach and lettuce to Northern markets.

The kale and spinach crops are fine indeed. We have seen crops of spinach, this fall, good for 450 barrels to the acre. Last year the yield was about one-half as much. Last year, however, the price ranged from \$2 to \$7 dollars per barrel, this year the price ranges from \$1.25 to \$2.50 per barrel. It is a profitable crop.

Lettuce is also going North. Plenty of cabbages are yet to be set out in the open air, whenever the weather moderates. Several truckers have already sown large areas in radish. This crop (radish) will

be sown at intervals from now on to the middle or last of February.

Every day we see numerous farm wagons, heavily loaded with kale, spinach and lettuce, going to the various wharves for shipment to New York, Philadelphia, Baltimore, Boston, Washington and other Northern and Eastern markets.

The freight on spinach and kale is fifteen cents per barrel.

A. JEFFERS.

Norfolk, Va.

THE BOLL WEEVIL.

"The effects of the ravages of the boll weevil in Texas may be summarized as follows:

"It has during the last five years caused a loss of at least \$80,000,000.

"It has increased decidedly the area required to produce a bale of cotton.

"It has practically destroyed the credit of the small farmer, who has been in the habit of depending upon cotton, although farmers who have diversified their crops are still able to obtain necessary credit.

"It has had the effect of driving large numbers of negroes from the cotton lands of the State. Negroes lend themselves poorly to the modifications in the system of producing the staple, which are necessary on account of the ravages of the pest. Intensive cultivation, to which negroes can be brought only with great difficulty, is one of the great essentials in producing a crop.

"It has forced a diversification of crops, and in this way is considered by many persons as a beneficent influence. While this may be the ultimate result of the work of the boll weevil the depression that comes from the changes necessary before a complete system of diversification may be followed is apparent to all parties who have investigated the matter in Texas."

THE COTTON SITUATION.

Editor Southern Planter:

There is a good deal of commotion among the cotton planters of the South, trying to solve the problem of obtaining fair and remunerative prices for our cotton. I am aware that your valuable journal is mostly devoted to telling us how to make crops. I hope, however, that it will not be a very great departure from your custom to tell us how to get proper value for them after they are made. It is to this end that I write this article. If the cotton growers would establish warehouses all over the cotton belt and have agents to receive the cotton and have it insured against fire, and demand a uniform price of say ten cents per pound, it would make the cotton growers masters of the situation, and secure to them

the inalienable right of pricing their own product. They could borrow three-fourths of the value of their cotton either from individuals or the banks, and could thereby pay their pressing debts until the final sale. The agents of the cotton factories and shippers who bought the cotton would have to pay for hauling it to the depot and freight on it to its destination. This expense which now comes out of the cotton growers, alone, I think, would about pay all the expenses of storing it in the warehouses. This seems to me to be the only practical solution of the vital problem that now confronts us. If this state of things is to continue it will make the price of cotton so uncertain, combined with the difficult labor problem, as to discourage and to a great extent break up cotton raising. If the price were stable and certain both farmers and factories would have a sure and certain basis upon which to operate. How about the merchants who deal in cotton fabrics going around to the factories and taking an inventory of their stock and dictating the price of their products according to the amount of stock on hand. This seems to me to be as just and right as for the cotton buyers to ascertain the amount of cotton we have on hand and dictate the price to us. Hoping the cotton growers may be aroused to adopt this or some more feasible and practical plan.

R. S. POWELL.

Brunswick Co., Va.

WATER CISTERNS FOR FARMS.

Editor Southern Planter:

I have had a large experience in the building of cisterns and tanks, and give my plans for the benefit of your readers, who may desire to make use of this method of storing water, without the expense of a carpenter's made "center" or skilled mason. First, as to size: That should depend upon the roof which gathers the water. The roof of a barn 45 feet square should afford water enough on each side for a cistern 7 or 8 feet in diameter by 8 feet deep, filling it in a single continued rain of from one to three days, according to the downpour. A cistern 6x8 feet deep will hold 1,692 gallons, one 7x8 2,308 gallons, and one 8x8 3,008 gallons. Suppose the cistern is to be 6x8 feet deep. When the hole has been dug to the full depth and six feet in diameter, dig a set off at the surface not less than one foot deep by one in width. This is to be filled with stone or brick, set in cement mortar to form the base of the arch and is the only

wall required. The mortar is best made in an iron wheelbarrow out of Portland cement one part, to from two to three parts of clean sand, measured into the iron hopper and thoroughly mixed, dry. If the cement has become lumpy through dampness it should be heated and all lumps mashed. Then add water as required. The base ring of concrete or other material to be finished with a slope to the inside. Now have at hand several old wagon tires. First of all, erect a scaffold inside the cistern, take (4) four poles and nail on cross pieces to hold a platform, for the builder has now to work inside the ring. If hard brick are used, the arch will be only four inches thick or width of a brick. The first layer will have the slope of the base, the last layer will be nearly perpendicular. As soon as the courses need a support place one of the wagon tires to hold them. This plan also ensures a true circle. I have rarely used more than three tires, sometimes placing a box or piece of wood on the platform until the brick was fast. The smallest tire should be made the diameter of the required man hole, say two feet. For a cistern of six feet the first tire or hoop should be about four feet. The best thing for a man hole is the cast iron base of an old hot air furnace, to be had at a junk shop. When the arch is completed it should be well plastered over and let stand until set before taking out the scaffolding. Where stone is plentiful and of a good size an arch with aid of iron hoop is most easily constructed for a small cistern with an opening of nearly two feet. Many stone can be had that will reach from the solid base to the small hoop to form the man hole. In this case if the fire pot of a furnace is used I have best succeeded by suspending the fire pot by block and tackle from three poles as a tripod at the intended centre of the arch and then found stones long enough to reach from the base to the edge of the fire pot or hoop. Four such stones are only necessary. Then fill in with smaller ones (irregular pieces). Cement the whole mass together, and when so done let the fire pot down and the arch is complete. Have made many arches in this way with either brick or stone, and each time with a new, unskilled laborer, who invariably wonders "how the doggone thing is going to stay up," and I have to inspire confidence by making the first descent. When the arch is set and solid remove the scaffold and with the same cement plaster first the sides of the tank with a thick coat. If in gravel or sandy ground, a second coat of cement may be required. Plaster the bottom last. Before the arch is begun a four inch terra cotta pipe must be laid for a drain, and a four

inch iron pipe or terra cotta one inserted into one side with a bend for the supply pipe or spout.

Avenel, Md.

OTIS BIGELOW.

CORN BREEDING AND PRODUCTION.

Editor Southern Planter:

I send you by express a sample of the corn I have been raising and improving for the past ten (10) years. I first started with the best type of Gourd seed and crossed it with Hickory King and a small per cent. of Golden Dent. Two years ago I mixed about one-third of the Red Cob variety on account of the small cob and deep grain. Now I have the best corn for general purposes I ever saw. I always use special plains in selecting my seed, planting none but from the best developed ears. This corn, from which the sample is sent, was planted June 14, 1904, after having taken from the land a heavy crop of oats and crimson clover. The corn was worked but twice, first with a Hallock Weeder, when two or three inches high, and laid by with a five tooth Iron Age cultivator, when about two feet high. It grew so rapidly that it soon shaded the ground, and there was no grass to amount to anything. It stood 15 inches apart in the rows, rows four feet apart. It was cut and shocked October 5th, and the land seeded at once to oats and crimson clover. I have a poor stand of clover owing to the drought at that time. When the corn was shucked it measured 67 bushels to the acre, and the finest lot of fodder I ever saw that was housed before any rain on it to amount to anything. Of course, I know there are larger yields of corn made to the acre, but considering the crop of oats and the amount of work the corn had I am satisfied with the yield from that piece of land. I will state that when I first commenced with this piece of land fifteen years ago it had been scratched over, and the soil washed off as the land lies quite rolling, and is a coarse gravel soil. I found that I could not get a turning plow to go in over two inches, as there was a hard pan below that depth. The first thing I did was to put a Coulter behind the turning plow and subsoil as deep as I could get the Coulter. It was a hard and tough job at first, but I have never had any trouble since in getting the plow to go in. I believe in deep plowing and subsoiling. One good thing I had in this piece of land was a deep red clay subsoil (a good foundation to build on). For the past ten years this piece of land has made me two crops each year, crimson clover and corn. Several years I have mixed oats with the clover, and always

sow Purple Top and Southern Prize turnip seed with the clover which often gives me a fair crop of turnips and a lot of nice greens early in the spring.

I generally cut the clover off about the 20th of May and broad-cast the land with stable or barn-yard manure. I tried chemical fertilizer once, didn't think it paid. I always break the land deep, then run an iron-tooth drag over half a dozen time if necessary, until I get the land well pulverized. I started with two inches of coarse gravel, and now I have a soil ten inches deep and as light as an ash bank. There is nothing I have tried that pulverizes and lightens land so well as Crimson clover, and there is no crop in my experience that beats clover or Cow peas to grow a crop of corn after. I had one acre last year that followed a pea fallow with a light coat of stable manure. The land was subsoiled and thoroughly dragged. I did not measure it, but am satisfied there was not far from seventy-five bushels taken from it. The land now has a good stand of oats, seeded about October 1st. I have found that September is the month to sow oats with us.

I am a constant reader of *The Planter*, and always recommend it to my friends, as I believe it the best agricultural journal published for the Southern farmer. I have ten or fifteen bushels of this corn carefully selected for seed, which will be found offered in the advertising columns of this issue.

Granville Co., N. C.

WM. S. HUNDLEY.

GOOSEBERRIES.

Editor Southern Planter:

These berries require a rather elevated location with good natural drainage, since both fruit and foliage are quite susceptible to attacks of mildew. The fruit should be more generally cultivated, since it is very productive, and of good quality. I prefer a sandy loam soil of good fertility and natural drainage.

There are two classes of gooseberries—English and American varieties. While many of the English varieties are quite large and handsome, still, all I have tested in this State have mildewed badly, even under careful spraying. The American varieties have done far better with me. The most hardy and productive variety I have tested in Virginia is the Houghton. The fruit is a little small, but of good quality. There are two other American varieties that I have not tested, but they are recommended highly. The two I refer to are Josselyn and Columbus.

R. H. PRICE.

Montgomery county, Va.

THE

Southern Planter

PUBLISHED BY

THE SOUTHERN PLANTER PUBLISHING CO.,
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.

B. MORGAN SHEPHERD,
Business Manager.

TERMS FOR ADVERTISING.
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known. Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

Address THE SOUTHERN PLANTER
RICHMOND, VA.

Entered at the Post-office, Richmond Va., as second-class matter.

OUR JANUARY ISSUE.

We have every reason to feel proud of our January issue, which was our usual Holiday number. We have been showered with compliments from all over the United States in regard to it, many of our friends claiming it the best issue we have ever gotten out. We are very grateful to our friends for these compliments, and also for the kind interest taken and liberal support they are giving us in sending in subscriptions of their friends. We hope, however, to show our appreciation in a more substantial form by giving them more and better value for their money hereafter.

We have saved 500 copies of this issue, and will start all new subscriptions with it as long as they last.

PUBLISHER'S NOTES.

To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month.

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Wood's Grass

AND

Clover Seeds.

For clean fields and clean crops,

Sow Wood's Trade Mark Seeds,
the best qualities obtainable.

Wood's Seed Book gives the fullest information about Grasses and Clovers, best time and methods of seeding, kinds best adapted to different soils, quantities to seed per acre, best combinations for hay or pasturage, and much other information of the greatest value to every farmer.

Wood's Seed Book is mailed free on request. Write for it, and Special Price List of Farm Seeds.

T. W. Wood & Sons, Seedsmen,
RICHMOND, - VIRGINIA.

WOOD'S SEEDS

—Awarded—

GRAND PRIZE - ST. LOUIS, 1904.
GOLD MEDAL - PARIS, 1900.

SAN JOSE SCALE

and other INSECTS killed by

GOOD'S

Caustic Potash Whale-Oil Soap No. 3

'Endorsed by U. S. Dept. of Agt. and State Experiment Stations. This soap is a fertilizer as well as an insecticide. 50lb. boxes, \$2 50; 100lb. boxes, \$4.00; half barrels, \$9.10; 2 1/2c per lb.; barrel, \$25.10, 3/4c. Send for Bulet, JAMES GOOD, Original Mfr., 939-41 N. Front Street, Philadelphia, Pa.

FRAZER

Axle Grease

Best in the world.

its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand not affected by heat. **Get the Genuine** FOR SALE BY ALL DEALERS.

"FUMA" kills Prairie Dogs, Woodchucks, Gophers, and Grain Insects.

"The wheels of the gods grind slow but exceedingly small." So the weevil but you can stop their grind "Fuma Carbon Bisulphide" are doing.

EDWARD R. TAYLOR, Penn Yan, N. Y.



Kraus's Liquid Extract of Smoke

Smokes meat perfectly in a few hours. Made from hickory wood. Delicious flavor. Cleaner, cheaper. No smokehouse needed. Send for circular. E. KRAUS & BRO., Milton, Pa.

BANK OF RICHMOND,

Main and Tenth Streets.

CAPITAL AND PROFITS, - - - \$1,134,938.14.

Special attention paid to out-of-town accounts. Correspondence invited.

Three per cent. interest allowed in Savings Department,
Compounded semi-annually.

HOLIDAYS NO WASTE OF TIME.

The keeping of holidays works a beneficent change in the duties of the year, and awakens the finer feelings of our nature. It opens our hearts to such guests as charity, liberality, good-will and love for our fellow-men, and drives away, for a time, selfishness, one of the most sordid and debasing of human weaknesses. The susceptibility of our natures to the cultivation of the higher ideals of life makes the holidays especially valuable to us. It gives the occasion for reflection and introspection, showing where we have been amiss in our duties to our fellow-citizens, and how, on many occasions, we have given pain instead of pleasure, heartache instead of happiness. Every good citizen as he moves through the world should try to say or do something every day that will make some human being feel the better and the happier that he has lived.—Mrs. M. W. Earley.

DOW FARM FENCE
PRICE AND QUALITY
WILL PLEASE YOU
WRITE US NOW.
DOW WIRE WORKS-LOUISVILLE, KY.

FENCE STRONGEST
MADE. Bull
tough. Sold to the Farmer at Wholesale
Prices. Fully warranted. Catalog free
COILED SPRING FENCE CO.
Box
Winchester, Indiana.

**BEATS ALL SCHEMES FOR
AND WE WANT
AGENTS TO MAKE MONEY**
B. B. FENCE CO., Peru, Ind.

ANCHOR COILED
Spring Wire Fence
has reached that
perfection that
others are striv-
ing for. Our free fence
book tells how.
THE ANCHOR-FENCE & MFG. CO.,
Department H, Cleveland, Ohio.

Trouble with your Fences?
You won't have it if you
use the "Jones" Fences.
Made of most carefully
selected, well galvanized
wire—strong and durable.
Easy to put up. Write for
catalog No. 8 and prices.
Agents Wanted
International Fence Co.
98 Bottles-Ay, Columbus, O.

HARD STEEL.

WIRE-FENCE
Heavy lateral wire, heavy hard steel stay, coiled spring wire, sure grip Lock. In strength and durability, the Hard Steel can not be excelled. Write for catalogue and prices
THE HARD STEEL FENCE CO., Cuyahoga Falls, O

BROWN
Fence
15 to 35 CENTS PER ROD DELIVERED
We also sell direct to farmers at wholesale prices.
Coiled Spring Barbed Steel Galvanized Wire
Write for Fence Book showing 15 styles
THE BROWN FENCE & WIRE CO.,
Cleveland, Ohio

PAGE PROTECTION IS REAL PROTECTION



The Page is the fence that will turn the smallest as well as the largest and most vicious animals, and once properly erected will stand for years without repair. Every horizontal wire is a double-strength coiled spring wire, and is of a quality to hold its coil shape, giving the fence great practical elasticity.

PAGE FENCE

is the standard of reliability—has been for years. You know you are right when you buy Page—you are sure of good wear and good appearance.

A PARING KNIFE made from Page-Wire, a handy kitchen utensil, which illustrates the high-carbon steel used in Page-Wire, will be sent FREE, together with booklet, upon request. Write at once.

PAGE WOVEN WIRE FENCE CO., Box 5114, ADRIAN, MICHIGAN.
Warehouses at Augusta, Ga.; Staunton, Va., and Harrisburg, Pa.

WITH THE ADVERTISERS.

In this issue will be found advertisements of all kinds of implements and machinery, banks, insurance companies, seeds and nursery stock, livestock of every description, incubators, poultry and poultry supplies, fertilizers and chemicals, as well as hundreds of useful devices for farm and personal use. We respectfully refer our readers to these advertisements, which they desire to purchase anything. Always mention the Southern Planter when writing to advertisers.

The Merit Rose Co. offers all kinds of rose bushes in its ad elsewhere in this issue.

Mr. Henry S. Bowen offers some finely bred poultry and Muscovy ducks.

The Anchor Fence and Manufacturing Co. is a new advertiser in this issue.

Latham & Co. start their spray pump advertising with this number. Look up the ad and send for their catalogue.

Send to The Bateman Manufacturing Co., Box 167, Grenloch, N. J., for a new "Iron Age" catalogue.

The Studebaker Wagon is offered to our readers as usual this season. This company has a very attractive ad on another page.

Shorthorn cattle at right prices are offered by Mr. A. J. S. Diehl.

Mr. Henry Warden is offering some choicely bred young Berkshire pigs.

Mr. S. W. Anderson, of Blaker Mills, W. Va., who is proprietor of the famous Ingleside herd of Hereford cattle has an attractive ad in another column. Send for his catalogue and illustrations of some of his splendid animals.

D. O'Sullivan offers for sale 50,000 empty barrels to the truckers of this section.

Red Poll Cattle are being advertised by Pierson Bros., Summit, Va. This firm was among the first breeders of this most excellent breed in this section, and has always kept first class, pure bred cattle.

Parties interested in trotting and pacing horses should not fail to read the advertisement of Captain George Campbell Brown to be found on another page.

J. A. Bennett & Sons Co. are offer-

Union Lock Poultry Fencing

As It Looks When Erected

Strongest and Best By Every Test.

Has been fully tested by leading poultrymen. All heights (12 in. to 7 ft.). Has the most for small chicks. Over 1,000 rods of this fence used at Wood Pond Poultry Farm, New Jersey. You will be pleased with it.

Our Low Price will Surprise You.

We will ship from mills in Connecticut, Illinois and California, and guarantee prompt delivery. Catalogue of Farm and Poultry Fencing sent free.

Write Us What You Want.
Do It To-Day.

CASE BROTHERS,
16-22 Main St., Colchester, Conn.

ARE YOU IN THE DARK?
Our New Catalog
and a sample of our Wire
Board Fencing will enlighten you.
THE TRUSS & CABLE FENCE
COMPANY
82 Doan Ave., Cleveland, O.

GENUINE "BROWN"
DOUBLE SHOVEL PLOW
Made with WOOD CENTER
BEAMS AND STEEL SHANKS
CONTRACTOR'S PLANT
LIKE ALL THE
"BROWNS" IT
IS THE BEST
OF ITS KIND.
No chance
for horse to
get foot be-
tween beams
No. 2
Equipped with our improved slotted shovel
attachment, a device which greatly adds to the
life of the shovel. Always ask for the BROWN
and insist upon getting it. It is our duty to de-
scribe, write to us direct. Our free catalogue
contains full description of our single and double
Shovel Plows, Riding, Walking and
Tongueless Cultivators, "400 N" Sur-
face Cultivators, Harrows, Wagons, etc.
BROWN MFG. CO., ZANESVILLE, O.

In writing mention Southern Planter

THE BEST WAGON For Every Variety of Use is the "BROWN" WAGON

AND THESE ARE THE REASONS
WHY



The "BROWN" principle increases its strength, durability and neat appearance.

We use Double Sliders for the coupling pole.

The Tongue Chains have Coil Springs in them—makes them easy on the horse's neck.

Seat Hooks locate themselves—can't get out of place, can't slip. Hot Oil-boiled Wheels—can't come off.

Machine Boxed Wheels—must be true.

Machine Fit Scales—better than can be done by hand.

Have Extension Shoe Spline which fully protects axle—used only on THE "BROWN" WAGONS.

Branch Chains to tongue chains—can't whip horse's legs.

Besides all this it is stamped "BROWN," which is a guarantee of excellence and superiority.

All about styles and sizes in free circulars.

BROWN MFG. CO., ZANESVILLE, OHIO.



The Gahoon

is the world's standard Hand Broadcast Seed Sower. Positively accurate and lasts a lifetime. Write now for description.

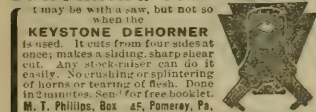
GODELL COMPANY,
63 Main Street, Antelm, N. H.

SAW YOUR WOOD



THIS A FOLDING SAFETY MACHINE. 2000 LBS. BY ONE MAN IN 10 SECONDS. Send for FREE list, catalogue showing latest improvements and best prices for thousands. First order secure agency Folding Sawing Mach. Co., 16 So. Clinton St., Chicago, Ill.

DEHORNING ISN'T CRUEL



It may be with a saw, but not so when the
KEYSTONE DEHORNER
is used. It cuts from four sides at once; makes a sliding, sharp clear cut. Any stockman can do it easily. No crushing or splintering of horns or tearing of flesh. Done in 2 minutes. Send for free booklet.
M. T. Phillips, Box 45, Pomeroy, Pa.

WE'LL PAY THE FREIGHT
and send 4 Heavy Wagon, Steel Tire, at \$7.25
with Rubber Tires, \$12.00, 1 mfg. wheels \$1.50 in-
crease. Two Buggy, \$25.00. Harness \$3.00. Write for
circular. Learn how to buy direct. Repair Wagon \$2.50.
Wagon Umbrella FREE. V. BOOTH, Cincinnati, O.

A neat Binder for your back num-
bers can be had for 25 cents. Address
our Business Office.

ing their incubators and brooders to
our readers. They have a large ad on
another page.

A number of attractive bargains in
farms are offered by Mr. J. W. Guinn.

The Johnson Harvester Co. are going
right after the trade of the farmers
of this section, as evidenced by their
ad elsewhere in this issue.

The Brauer Chemical Co. has an at-
tractive way of introducing its Baby
Ivory Cream. Look up the ad.

Myers & Son are offering a limited
stock of their Premo Dewberry.

The advertisement of Sloan's Linim-
ent for men and beast is resumed in
this issue.

The Hillside Nursery is a new comer
in this issue. It will be worth your
while to look up their ad.

The Elkhart Carriage and Harness
Manufacturing Co. starts the season's
advertising with this issue. This firm
has been selling carriages and harness
direct to farmers for thirty-two years,
and is well known to numbers of our
readers.

The Spramotor Co. makes its initial
bow to our readers this month. We
suggest an investigation of their well-
known spray pumps before purchas-
ing elsewhere.

The J. S. Kemp Manufacturing Co.
offers its well known manure spreader
in an attractive announcement else-
where in this issue.

Look up the ad of Yager's Liniment
to be found on another page.

Biltmore Farms issue the "last call"
for their Annual Berkshire Sale. Send
for descriptive catalogue.

The Triune Fruit and Produce Co.
is soliciting consignments. Investi-
gate this company's facilities.

The Fontaine Co.,

Gentlemen:— It has been my for-
tune to become the owner and user of
a pair of your Safety Tugs. After two
months' use, I can truthfully say that
I find them not only a great con-
venience, but I also find that the mare
travels better, the harness does not
rub her back, and I always know when
I start down a steep hill that should
the holdbacks give way, the Safety
Tug is there to offset what would
otherwise be a serious proposition.

I am sure you will do a large busi-
ness as soon as the public gets on to
the really good thing that you have.

Yours truly,

JAMES W. JONES.

Washington, D. C.

**WILSON, THE REAL ESTATE SPE-
CIALIST.**

We invite the attention of our read-
ers to the ad of Mr. A. P. Tone Wilson.
Jr., the well known western real es-
tate specialist. Parties desiring to
buy or sell real estate are invited to
correspond with him, as he makes a
specialty of doing business at long
range. Look up the ad and write to
him.



Your Feeble Old Wagon

has many years' service left. Re-
place its slinky wheels with

ELECTRIC

Metal Wheels.

Made to fit any wheel. Strong, light or staggered oval
steel spokes, cast in the hub, but riveted in the tire.
Broad tires save rutting and drafts. Any height de-
sired. Write for free catalogue for particulars.
ELECTRIC WHEEL CO., BOX 146, QUINCY, ILLINOIS.

Let Us Send You Our Book.

about good wheels and good wagons that will save
you a lot of work and make you a lot of money—the

ELECTRIC STEEL WHEELS

and the

ELECTRIC HANDY WAGON.

By every test, they are the best. More than one
and a quarter million sold. Spokes riveted to the
hub. Can't work loose. A set of our wheels will
make your old wagon new. A catalogue free.

ELECTRIC WHEEL CO., Box 146, Quincy, Ills.



BUGGIES.



SPINDLE WAGONS, CARTS.

etc. 84 different styles and grades. Finest
material and workmanship. Get our prices
and see our vehicles before purchasing.
SAFETY BUGGY CO., 1209 E. Main street,
Richmond, Va.



SUPERIOR

Adjustable Storm
Hood, non-elastic.
Fits different bug-
gies. Can be at-
tached or detached
in half a minute.
Two extra large
lights. Gives com-
plete view. The
most serviceable
hood made.

Write for Illustrated circular. Address
J. B. CHEERS, Mr.,
61 Poplar St., St. Louis, Mo.

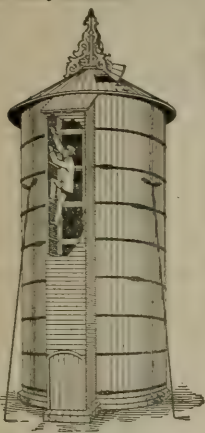
—GREAT— HARNES INVENTION

prevent sores and white spots on horses' backs by regulating tension of girth as if it were elastic. Prevent buggy running against horse if breaching breaks. Prevents girth breaking and shafts warbling. Made of best single leather. Outlast other tugs. Hand-
some in appearance. For sale by D. A. Brown's Son, Richmond, Va. Pair sent postpaid for \$15.00. Write for circular. THE FONTAINE CO., Christie, Va.

"THE ONLY WAY"

The only way to make dairying a success and pleasure is to use a LANSING TUBULAR SILO. the kind that satisfies.

With Improved Continuous (Air Tight) doorways, guaranteed to preserve its contents.



Attractive prices to early buyers before the rush.

A. M. D. HOLLOWAY,
A. Builders Exchange Phila., Pa.
WRITE FOR CATALOGUE AND PRICES.

Best kind, best of its kind for all hand work, is the

Success Knapsack Sprayer

Knapsack and Bucket Sprayer Combined.

Brass pump with bronze ball valves, 5 gal. copper tank, mechanical agitator; pump worked with either hand. Arranged for easy carrying and handling.

WE MAKE 20 STYLES SPRAYERS.

Hand, Bucket, Knapsack, Barrel, Field, Tower. We meet all wants. Send for free catalog.

THE DENING CO., SALEM, OHIO.
HENRY & SHELLEY,
Water Ave., Chicago.

Spray Pumps

DO NOT be fooled into buying low-priced Iron Pumps, or those with so-called brass working parts. They soon wear out and are thrown away. GET THE BEST! A pump that is good for years, made of solid brass, simple in construction, easy working, capable of high pressure, no trouble to keep in order. I make a advice of practical fruit growers, and buy no Spray Pump only those manufactured by

LATHAM & CO., Sandusky, O.
They are THE BEST. send for catalogue.

ENGINES; 13 Horse Traction \$250; 10 Horse Traction \$200; Rollers, Engines new and second hand from \$4 to 100 Horse. Single saw mill \$125. Double mill \$180. Machinery of every description at one-third actual value.

D. CASEY, Springfield, Ohio.

GOOD ROADS.

Editor Southern Planters

Gentlemen. — The National Good Roads Association have concluded arrangements with leading railways companies for operating Good Roads Special Trains in 1905. The chief object is to arouse favorable sentiment, organize local associations and to visit the thirty-six General State and Territorial Assemblies to meet in 1905. The first train will be equipped and leave St. Louis over the Missouri, Kansas and Texas Railway System on its educational campaign, Monday, January 9th. It will then be operated over these railroads. In conjunction with these trains the National Good Roads Convention, has been called to meet at Jacksonville, Fla., January, 19th, 20th, and 21st.

Extensive facilities for advertising the Convention and congregating hundreds of delegates are now under way. All railroad companies verging to Florida points, have been requested to join in making a special one-fare rate for this occasion. The special purpose of calling the Convention in Jacksonville, so early in the year, is to outline and recommend practical Good Roads Legislation.

Governors of all States will be requested to issue a proclamation to appoint from ten to fifty delegates. The commercial organizations, mayors of cities, and county or fiscal courts will name three delegates.

President Theodore Roosevelt. President Estrada Palma, of Cuba, the Governor of Panama, and the Governors of all States contiguous to Florida will be personally invited to attend the Convention. The Presidents of several leading railways, including Hon. Samuel Spencer, of the Southern; Hon. Stuyvesant Fish, of the Illinois Central; the President of the Seaboard Air Line; the Florida and East Coast railway, and the Atlantic Coast, and the officials of leading boat lines, will be especially invited. Railroads will send at least three delegates, including their industrial agents.

Gen. Nelson A. Miles will deliver addresses. The invitation will be further extended to members of Congress, and Presidents of leading universities. Hon. George B. McClellan, Mayor of New York; Hon. Carter Harrison, Mayor of Chicago, and Governor-elect Joseph W. Folk, of Missouri. The Good Roads Convention will be held prior to the automobile races of the world, to be run at Ormond Daytona Beach, January 23d to 28th inclusive, and the two events being held in conjunction are attracting the deepest attention of road advocates in Europe, as well as the United States. It will be a special and most favorable time for an outing of the people of the cold Northern States, who seek recreation in the salubrious Florida climate.

Respectfully submitted,

W. H. MOORE,
President.

Hardie Spray Pumps

are the fruit growers best protection against all insects and diseases which attack fruit trees. The Hardie Spray Pump is the simplest, strongest, most durable and highest pressure spray pump made and "it works!"

Send today for our free book on Spraying giving all the best formulas and successful fruit growers make big money. Just a request for a postal will bring this valuable book.

HOOK-HARDIE CO.
184 MECHANIC ST. HUBBARD, MICH.

Get the Best

A Good Spray Pump earns big profits and lasts for years.

THE ECLIPSE

is a good pump. As practical fruit growers were using the common sprayers in our own orchards—found their defects and then invented The Eclipse. Its success practically forced its manufacture on a large scale. You take no chances. We have done all the experimenting.

Large fully illustrated Catalogue "Tested—on Spraying—FREE."

MORRILL & MORLEY, Benton Harbor, Mich.

Defender Sprayer

All brass, easiest working, most powerful, automatic mixer, expansion valves, double strainer. Catalogue of Pumps and Treatises Spraying free. AGENTS WANTED.

J. F. Gaylord, Box 5, Catalina, N. E.

MADE \$1725

in spare time and home country. You may do as well. Orders come fast for the

"Kant-Kling" Sprayer

with new spring shut-off. Catch a good thing quick. Write for free sample plan and full particulars.

Rochester Spray Pump Co., 21 East Ave., Rochester, N. Y.

\$85

Will buy our 2 H. P. 4 Cycle Engine. Buy direct and save dealers profit. Vertical, Horizontal and Portable Gasoline Engines. Pumping out a specialty. Write for free circulars. BAU-ROTH BROS., 36-56 Fisher St. S. Springfield, Ohio.

Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 3 horse power, \$100; 6 H. P. double cylinder, \$200.

SOUTHERN MACHINE MANUFACTURING CO.,
731 E. Cary Street, Richmond, Va.

In writing mention Southern Planter

38 YEARS 38

making mills has perfected the

Built in
Eight
Sizes

1 to 20
Horse
Power



Quaker City.

They are ball bearing, consequently easy running. Grind all kinds of small grain and ear corn at the same time or separately. Can't be beat for making table meal. Require less power than any other mill on the market. Sent on Trial. Freight paid. Send for free catalogue.

The A. W. Straub Co.
327 Filbert St., Philadelphia, Pa.
47-49 Canal St., Chicago, Ill.

TRY THIS MILL

10 Days Free.
I will send any responsible farmer one of

Ditto's
Latest Double Cut,
Triple-Geared,
Ball-Bearing
Feed Grinders



On Ten Days Trial—No Money in Advance.
If it does not grind at least 20% more ear corn or other grain than any other two horse driven mill made, send it back at my expense. Don't miss this offer. Ball-bearing throughout. Only 10¢ sweep. Light draft. Grinding rings never touch each other—they last for years. Both grinders revolve; self-cleaning. Ask for new Catalogue.
G. M. Ditto, Box 43 Joliet, Ill.

One Operation
is all it takes to break, crush and grind, either fine or coarse, all grains for all feed purposes, when you use the

KELLY
DUPLEX
Grinding Mills
They are the fastest, easiest running, strongest made. New double cutters. Four sizes, any power.
THE O. S. KELLY CO., 159 N. Lime St., Springfield, Ohio

A Compost Drill,
That will thoroughly pulverize and evenly distribute from one hundred pounds to ten tons per acre; made in two sizes by J. M. LINDSEY, Crystal Springs, Ga.

WIRE \$1.40 PER 100 LBS.
SMOOTH GALVANIZED WIRE put up 100 lbs. to a bale, gauge from 11 to 14 inclusive. Lengths running up to 250 ft. Per 100 lbs. \$1.40. Fence Staples, all sizes, per 100 lbs. \$2.00. Wire Nails, assorted in a keg, per 100 lbs. \$1.20. Barbed Wire per 100 lbs. \$2.60. Poultry Netting, Field Fence, etc., at low prices. Ask for free catalogue No. 1, on merchandise of all kinds from Sheriffs and Receivers. **CHICAGO HOUSE WAREHOUSE CO., 35th & Iron Sts., Chicago.**

GOOD HOUSEKEEPING. BOILED BEEFSTEAK.

Of course, the Porter house or tenderloin steak is the best, and if you can afford it, by all means get the best, but round steak may be made a very toothsome dish if treated skilfully. Pound the steak well on both sides. Have the hoe very hot, just before using rub it over with a tablespoon of butter to keep the steak from sticking. Put the steak on the hoe and turn constantly to keep from burning, just as you take it off, pepper and salt both sides and put little pieces of butter about on it, cover it, and let it set in the warmer for ten or fifteen minutes. Serve hot on a hot dish.

BAKED STEAK.
Take two pounds of lean beef, and grind it twice in your meat chopper. Grind with it two rolls of stale bread, which have been moistened with water and the water squeezed out. Season the mass with an egg beaten light without separating, a tablespoon of grated onion, a large spoon of melted butter, salt and pepper to taste. Mix all together and make into a pome, with small pieces of butter about it put into a pan and surround it with two cups of water, sift a little flour over it and bake, basting constantly. You will find this good hot or cold.

STUFFED STEAK.
Select a nice piece of round steak cut thinner than usual. Make a dressing of stale bread crumbs, butter, salt, pepper, a teaspoon of sage and a spoon of grated onion, moisten very slightly and spread over the steak, roll it all up and tie in several places, and put it into a pan with two cups of water and a tablespoon of butter and bake slowly. Take off the strings and serve hot.

RICE MUFFINS.
Beat two eggs very light and add one pint of milk to them, sift two cups of flour with one teaspoon of baking powder and teaspoon of salt, rub a heaping cup of boiled rice into it and a large tablespoon of lard, now pour the milk and eggs into the flour and mix smooth, cook at once in muffin rings or pastry pans. Serve hot.

RICE PUDDING.
Take three cups of boiled rice, rub into it a large tablespoon of butter. Beat five eggs light separating the whites and yolks, add a cup and a half of sugar half a nutmeg, grated, and a wineglass of brandy or wine, turn all these into the rice and add five cups of milk. Let it bake until well set in a deep pudding dish. Serve either hot or cold, with cream seasoned with vanilla.

WATER SPONGE CAKE.
Beat twelve eggs until perfectly light, the white and yolks separately. To the yolks add six cups of sugar very slowly, beating all the time, then add two cups of cold water and a nutmeg grated. Sift eight cups of flour twice, and then add two teaspoons of soda, and four teaspoons of cream

Clark's Tools for Large Hay Crops

Clark's Rev. Bash Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the subsoil water. It is an excellent machine for covering in sugar cane. Strength guaranteed. Can plow a newly cut forest, stump, bush, or bog land, leaves land true, clean for any crop.

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tartar, sift again and add to the yolks, putting the beaten whites in at the same time. Do not beat after adding the flour, but just fold it in and bake as quickly as possible. This will make two large pans, enough for cake and sauce for twenty-two people.

BAKED MUSTARD.

Heat a quart of milk and pour it over the beaten yolks of eight eggs, add a cup of sugar and nutmeg. Let it get cold and then fill the custard cups, set them in a pan of water and put it into the stove, bake till the custard is set. Then add a meringue made of the whites of the eggs, and a cup of sugar seasoned with bitter almond or lemon.

GINGER BREAD.

Stir two even teaspoons of soda into two cups of molasses. (I use the corn syrup in preference to the ordinary black molasses, but when I can get good Porto Rico, I greatly prefer that.) Set it in a warm place and prepare the other ingredients. Rub a cup and a half of butter with two cups of sugar and four eggs, add two cups of buttermilk and the molasses, sift into it eight cups of flour, stir until smooth, add one tablespoon of powdered ginger, bake at once in a moderate oven. Better if kept two days, unless you expect to use it with sauce.

QUEEN OF PUDDING

I am frequently asked how to make this most delicate and delicious of all puddings, so I think it does no harm to repeat the "rule" for making it every now and then:


Scald two quarts of rich milk, and while hot, pour it over the well-beaten yolks of eight eggs. Crumble a quart and a cup full of bread crumbs and rub a half cup of butter, washed and creamed, into them. Put these into the milk and set it aside to cool. When ready to bake, add two cups of sugar and a cup of seeded raisins. Bake in the dish in which it is to be served for forty minutes, and then take out of the oven and spread over the top a layer of stewed apples or any kind of jelly or jam preferred, with a meringue made of the whites of the eggs and a cup of sugar over it, return to the oven and allow to brown and dry. Serve with cream.

APPLE PUDDING.

Pare and chop the apples into small pieces. Put a layer of bread crumbs into the bottom of a dish, then a layer of apples sprinkle sugar and all-spice about over them, then another layer of crumbs and so on till the dish is full, the crumbs on top, and slices of butter all about on it. Pour a cup of wine over this and a cup of water and bake slowly till the apples are done, of course, if the dish is a large one, you will need more liquid; wine and water in equal parts. This is fine.

LUNCH CAKES.

Two cups of sugar creamed with one cup of butter until light, add three eggs beaten very light, and a cup of seeded raisins chopped fine, with a teaspoon



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Potash

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as farm manager, by a skilled orchardist and general farmer. Satisfactory endorsement. Address J. M. MacGREGOR, Miller School, Va.

Position Wanted

as farm manager or superintendent, by a middle aged, single man, with practical and educational experiences in farming, dairying, sheep, cattle, swine, poultry, gardening, flowers, fruits and vegetables. R. S., care Southern Planter.

WANTED.

A FIRST CLASS MAN on a stock farm, one capable and willing to do all kinds of work, none but those who can furnish No. 1 references need apply. Will take two men if one is a good farm hand and willing to learn. Address, with references, JOHN F. LEWIS, Lynnwood, Va.

of grated nutmeg, one of powdered cloves and one of mace, dissolve a teaspoon of soda in a half cup of sour milk, add to the other ingredients and sift into the mixture six cups of flour. Roll about a fourth of an inch thick and bake until brown in a moderate oven.

CARAVAN.

MILLIONS OF VEGETABLES.

When the Editor read 10,000 plants for 16 cents, he could hardly believe it, but upon second reading finds that the John A. Salzer Seed Co., La Crosse, Wis., than whom there are no more reliable and extensive seed growers in the world, makes this offer which is made to get you to test Salzer's Warranted Vegetable Seeds.

They will send you their big plant and seed catalogue, together with enough seed to grow 1,000 fine, solid cabbage; 2,000 rich, juicy turnips, 2,000 blanching, nutty celery; 2,000 rich, buttery lettuce; 1,000 splendid onions; 1,000 rare, luscious radishes; 1,000 gloriously brilliant flowers, all for but 16 cents postage, providing you will return this notice, and if you will send them 20 cents in postage, they will add to the above a package of famous Berliner cauliflower.

A PRETTY CALENDAR.

A very pretty calendar has been issued by the Virginia-Carolina Chemical Company, manufacturers of fertilizers. We have seen a copy of this calendar, and it is very original and unique, lithographed in six colors, showing a farmer, a green tobacco plant, and some stalks of cotton with a mortgage on the ground being burned up. This company will take pleasure in sending to any of our readers a copy of this calendar on receipt of a 2-cent stamp, with your name and address, at the nearest city to you, mentioned in their advertisement in another column of this issue.

THE REAL THING.

Farmers who work out their road tax will appreciate this bit of humor from the Indianapolis Journal:

"There ain't no such a think as a real Christian," said the man with the patched jeans.

"Don't you think there ain't," said the man with the soft hat turned up behind. "I know one myself."

"Oh! he never missed going to meeting, I s'pose?" sneered the other.

"I ain't laying so much account on that as when it come time to work the roads, he went out and did an honest day's work, as if he was working his own farm!"

AGRICULTURAL LIME.

T. C. Andrews & Co., Norfolk, Va., are advertising agricultural lime at very reasonable prices and in quantities to suit. We are having a great deal of enquiry lately for lime and the above firm will undertake to supply all who need it.

THE IMPROVED
SCREW STUMP PULLER
Write for Prices.



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HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. 'Clears' will stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made. Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

STUMP PULLERS & C. WE PAY THE FREIGHT
SEVEN SIZES CATALOG FREE
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Best Oil Paint 75c. GALLON.

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BY WHITE WOMAN situation as house-keeper or children's nurse. Two years with present employer. Richmond, Newport News, Portsmouth or Norfolk preferred. Washington and Virginia references. MRS. BOWIE, General Delivery, Washington, D. C.



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Barless Barley
The barley of your dreams; no beard; easy to harvest; always a big yield. Mr. Wells, of Atlanta, Ga., N.Y., threshed 121 bu. per acre. You can beat this in 1905 if you try.

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The national wonder in oats. Will yield for you on your own farm from 150 bushels to 190. Try it.

Billion Dollar Grass and Teosinte

The two greatest forage plants of the century. Billion Dollar Grass will produce 12 tons of magnificent hay and Teosinte 80 tons of green fodder per acre. Catalog tells about it.

Look At These Yields

Speltz, 80 bu. grain per acre, and 4 tons of hay bales.

Macaroni Wheat, Rust Proof, 40 bu.

Victoria Rape, 40 tons of green food per acre.

Fee Oat, 85 tons.

Earliest Sweet Lane, 60 tons green food.

Potatoes, 800 bu. per acre.

Now such prodigious yields pay. You always get them when planting Salzer's Seeds.

Onion Seed 60c
a pound, and other vegetable seeds just as low. We are the largest Vegetable Seed growers in the world, operating 500 acres.

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We wish you to try our great Farm Seeds, hence offer to send you a lot of Farm Seed Samples, fully worth \$10.00 to get a start, together with our great seed catalog, all for but 10c postage, if you mention this paper.

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DIGGS & BEADLES' Reliable Seeds

have established for themselves a most enviable reputation. If you have never used them, ask your neighbors what they think of DIGGS & BEADLES' seeds. A trial order will convince you that the quality of our seeds cannot be surpassed, and our prices are most reasonable.

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and all Seeds for the Farm and Garden. Write for our new illustrated catalogue

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Seed Irish Potatoes.

500 bbls. second crop SUNLIGHT Seed Irish Potatoes at \$3 per bbl. f. o. b. here. C. B. MARTIN, Toano, Va.

WASHINGTON NOTES.

STATE ACTIVITY FOR PURE FOOD.

The friend of the pure food movement can extract considerable satisfaction from the work which North Dakota, one of the most recent official converts to the pure food idea, is now doing. After a crusade of some eight or ten years, North Dakota passed a pure food law about a year ago, with an appropriation of \$1,500. Prof. Ladd, the Food commissioner, estimates that the State Agricultural College has been to an additional expense of about \$4,000. The results, however, have been splendid, but the State is now asked to provide adequately for enforcing the law in the future.

As South Dakota is the notorious center of all questionable divorce proceedings so its northern sister has been one of the dumping grounds for the worthless adulterated and cheap poisonous foods shut out of other communities by the various State statutes. Upon analysis Prof. Ladd found some three-fourths of the canned products sold in the State badly adulterated. He has cut this down to less than 15 per cent., and has secured pledges from most of the prominent manufacturers, that they would send no more poisonously adulterated products into the State. This adulteration ramifies from every direction. Many people who have more money than they know what to do with, use Florida water in the bath. Practically all of the stuff analyzed by Prof. Ladd has been found made of wood alcohol, instead of pure alcohol, in which case, Prof. Ladd says, "the body absorbs the poison, which acts on the optic nerves, and has often resulted in blindness. It has also carried many of the Sioux Indians, indulging in it as a beverage, into the Happy Hunting Grounds." A certain North Dakota store-keeper is now awaiting trial, charged with murdering Indians through selling them this poisonous stuff. The more important instances of adulteration, however, are in the common foods and to these as well as drugs, the food commissioner will devote his energy if the North Dakota legislature backs him up.

If a sparsely settled northwestern State can enact a comprehensive pure food law, which will protect its working men, its business men, and its bankers from adulteration of food, it would seem that the United States Congress might at least do as much in regulating food products, where they are not covered by local laws or where interstate regulations interfere with such local laws.

CANNON FIRING TO PREVENT HAIL-STORMS.

Consul Covert, at Lyons, France, sends a very interesting report to the Bureau of Statistics, regarding the prevention of hail-storms by cannon firing, quoting from a report of Joseph Chatillon, president of two agricultural societies and of the Hail Cannon Society of Limas: During the fifteen years



50 BULBS
25 Cents.

Will cover in the house or out of doors.
Hyacinths, Tulips, Crocus, Fuchsias, Oxalis, Jonquils, Daffodils, Dewy Lily, Tuberoses, Gladioli, Chinese Lily, Begonia, Stornia, Lilies of the Valley—all postpaid, 25c. in stamps or coin. As a premium with these Bulbs we will send a FREE plant collection of flower seeds—over 200 varieties. Address, Hillside Nursery, Somerville, Mass.

SEED CORN.

I have for sale COCKE'S PROLIFIC and HICKORY KING seed corn. My crops last season averaged from two to three good ears to the stalk. You can do as well. Why plant inferior seed when you can get the best by paying only a little more for it? Price, per peck, 40c.; one-half bushel, 75c.; bushel, \$1.25, f. o. b. Dry Fork. J. NEAL WILLIAMS, R. F. D., No. 1, Dry Fork, Va.



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The earliest and most productive Blackberry variety. Very large, jet black, firm and solid. Crop ripens rapidly. This is the berry to plant for profit. Write at once for prices and particulars. Myer & Son, Bridgeville Nurseries, Bridgeville, Del.

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Burt, or Ninety-Day Oats.

The earliest, most prolific and surest cropping of spring oats; far superior to the ordinary spring or rust proof oats for spring seeding.

Wood's Quarter Century Seed Book gives full information about this valuable new oat, and all seeds for the Farm and Garden. It's mailed free for the asking. Write for it and Special Price List of Farm Seeds.

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GRAND PRIZE - ST. LOUIS, 1904. GOLD MEDAL - PARIS, 1900.

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are now offering at reasonable prices No. 1. APPLE TREES, 1 and 2 yr., mostly late 4s. of high grade stock, which is being drained as the FINEST STOCK EVER OFFERED IN THIS COUNTRY. KIEFFER PEARS, 1 and 2 yr., GRAPE VINES, SHADE TREES, PEACH, PLUM, MICHAEL'S EARLY STRAWBERRY, the best early berry, at \$1.25 per 1,000; 25c. per 100; Apple, 4 to 5 ft., 10c. each; \$8 per 100; Apple and Peach, as above, 5 ft. up, 15c.; \$10 per 100; Kieffer Pear, 5 ft., 60c., or \$5 dozen; Botton Plum, 4 to 5 ft., 25c.; \$15 per 100; Concord, 1 yr. Cottonwood Shade Tree, 5 ft. up, 25c.; Niagara and Worden Grape, 2 yr., \$5 per 100; or \$10 per 100. We can ship any time. Send money with order to insure prompt filling.

EMPORIA NURSERIES,

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Trees - Trees

I offer a fine lot of whole root trees.

APPLES, PEARS, PEACHES,
CHERRIES, PLUMS, GRAPE
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Save agent's commission by sending your order to the nursery.

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SPECIALTIES:

Cold Grown, Own Roots, Everblooming Roses and the Best of All Standard Roses, Including Runners.

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45 Varieties
A vigorous, healthy, well-rooted plant is more certain to live, grow much faster, less liable to disease. This is the kind of plants I furnish my customers: 25 years' experience. Lucetia and Austin Dewberry Plants, Asparagus Roots, Seed Corn, Second-crop Seed Potatoes, etc. Descriptive catalogue free.

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Strawberry Plants, Trees, etc.

\$1.60 buys 1,000 nice young STRAWBERRY PLANTS, and if you are not satisfied with them, you can get your money back. Send for free catalogue. JOHN LIGHTFOOT, R. F. D. 2, Sherman Heights, Tenn.

1,000,000 Cabbage Plants

for sale by Alfred Jouannet, Mount Pleasant, S. C. Varieties: CHARLESTON WAKEFIELD, SUCCESSION. Plants hardy, young, medium size. Price, cash, f. o. b. Charleston, \$1.25 per 1,000; \$1 above 5,000. Special price on large lots.

before, cannon were used he estimates that the damage from hail amounted to over \$3,000,000. During the five years in which cannon have been used the losses have aggregated but \$159,000. The effect of sustained cannon firing is "cessation of thunder and lightning, dispersion of the clouds, and a slight fall of rain and snow," instead, probably, of hail. "The great Beaulapais wine growing district fairly bristled with cannon, and while there were many storms, the losses from hail and wind and rain were infinitesimal. The national government provided powder for the wine growers at cost." Mr. Covert says that he has met a dozen or more large wine growers in this district, who assert emphatically that they have not the remotest doubt of the efficacy of the cannon to destroy the hail in the clouds and convert it into a mild rain.

Representative Cowherd, of Missouri, has introduced a bill providing that the rate of postage on packages of books and merchandise mailed at the distribution post-office of any rural free delivery to a patron on said route, shall be 3 cents a pound. This does not include mail transmitted from one office to another, in other words, it is local, and it limits the weight of packages to five pounds.

A timely Farmers' Bulletin, which is just being reprinted by the Department of Agriculture, is 'Varieties of Fruits Recommended for Planting' (No. 208). This offers useful suggestions to those who are contemplating putting out a few trees in the spring, and do not consider the matter of selection of varieties of sufficient importance to make a study of the question. There is probably no more careless practice than one which very generally prevails in fruit-tree planting on farms where the business of the section is not fruit raising—where the farmer plants simply a small orchard, not intended to be the main reliance for farm profits. In this case, he is not infrequently decided on tree planting by the persuasive eloquence of some tree agent. If this is so, it goes without saying that he will follow the agent's advice as to what to plant, and even if he is dealing with an honest concern, and gets good healthy trees, the chances are more than even that the agent is not qualified to give full advice in the various localities through which he travels.

If the fruit tree-planting is to consist of but a single tree, it will amply pay the owner to get all the information he can, and decide just what is the very best tree he can plant. That tree may outlive him many years. It may grow to be a great producer. It may cost the owner a few cents more per tree, and some additional trouble to get the best tree for the purpose, but the right tree may produce in value

Lamp-chimneys that break are not MACBETH'S.

If you use a wrong chimney, you lose a good deal of both light and comfort, and waste a dollar or two a year a lamp on chimneys.

Do you want the Index? Write me.

MACBETH, Pittsburgh.

PEAS FOR SALE.

2,000 bushels of Whip-Poor-Will, \$1.35.
200 bushels of Red Ripper, \$1.35.
1,000 bushels of Soja Beans, \$1.35.
2,000 bushels Mixed Peas, \$1.30.
2,000 bushels of Clay Peas, \$1.35.
500 bushels New Era, \$1.60.
500 bushels of Brown Eyed Whites, \$1.65.
500 bushels of Black Eyed Whites, \$1.75.

All our peas are 1904 crop, re-cleaned, sacked in even weight 120 pound sacks.

These prices are f. o. b. Hickory, and subject to market changes.

HICKORY MILLING CO., Hickory, N. C.

Selected Seed Corn,

yielding 60 to 75 bushels per acre; bred by me. Particulars of same in an article elsewhere in this issue. Limited quantity of seed, \$2 per bushel. WM. S. HUNDLEY, Oxford, N. C.

Bush Lima, Wood's Prolific, Pole

LIMA, WHITE, CREASE BACK and mixed COLORED CORN-FIELD BEANS, SELECT SEED OF HOLT'S STRAWBERRY CORN for sale. Also, a pure bred POLAND CHINA brood sow to farrow with second litter in March. A large fine animal. MRS. L. AVERILL, Howardsville, Va.

For Potato Growers

We have a carload of fine WISCONSIN SEED IRISH POTATOES on hand, which we sell in large and small quantities, at very reasonable prices, delivered at any station or landing. MEYER & JEHN, Farmville, Va.

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LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

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Northern Virginia Farms

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 5-126 acres; half timber, balance cleared, 11-2 miles from station. Good 7 room house; large barn; good water. Price, \$2,000.

No. 16-130 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$20 per acre.

No. 22-225 acres. Two and one-half miles from station. Forty acres timber, balance cleared. Fine land. In good condition. Good 7 room house. Large barn, etc. Price, \$20 per acre.

No. 40-133 acres; one mile from town, on fine McAdams road. Nice 7 room house, 3 porches. Good well and springs. Good barn, with stalls for 10 cows and 5 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land sandy and clay. Two acres in orchard; trees in full bearing. Price, \$2,000.

No. 41-26 acres; 10 miles from Washington, D. C.; 2 miles from an electric and steam railroad. Thirteen room house in nice shaded lawn, 2 cellars, well at house. Nice orchard, in full bearing. All necessary out buildings in good repair. Price, \$3,500.

No. 43-30 acres; an elegant brown stone house, with 6 rooms, 2 porches. Three acres young orchard, in full bearing. All necessary out buildings, in good repair. A large stone mill building, with 2 sets of corn burrs, has 20 foot water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$3,200.

No. 47-100 acres; 2-1/2 miles from railroad; 50 acres cleared, all level and in fine state of cultivation. New 5 room house. Stable for 4 horses and 6 cows. Young orchard. Good well at house. Situated on popular dirt pike. In Loudoun county. Price, \$2,500.

No. 48-226 acres in Loudoun county; 30 acres in hardwood timber, balance cleared and in fine state of cultivation, nearly all in grass. A new 7 room house with well at door; 2-1/2 miles from the railroad. In refined neighborhood. Land smooth and a little rolling. Close to school and churches. Price, \$200 per acre.

No. 50-480 acres in Loudoun county, in the best grazing section of the State, all in grass; 12 room residence, situated on elevated ground in a large shaded lawn. An elegant large orchard in full bearing. Stabling for 50 cattle, farm grazed and fattened 65 export cattle last season. Well fenced, and an abundance of running water. Price, \$44.00 per acre.

No. 51-212 acres; 25 acres in timber. Land all in fine state of cultivation, mostly in grass. Small house on farm. Good well and several never failing streams. Situated on a broad McAdams pike. Close to schools, churches, P. O. and store, in a refined section. Price, \$3,800.

Write for full information, and price list of other farms.

W. E. MILLER, Herndon, Va.

VIRGINIA...AND... THE PLACE ...TO... FIND THE BEST HOMES

Where Health, Climate, Soil, Location and markets are un surpassed. Any size, price and price to suit the buyer. Va. stock, poultry, fruit, poultry or fish and oyster farms. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 32 p. pamphlet giving full particulars.

W. A. PARSONS,
C. & O. Main St. Depot. - - Richmond, Va.
ESTABLISHED 1875.

a dollar a year more than the wrong tree for the next thirty years.

A good thing to have now—get it from your Member of Congress or the Secretary of Agriculture—is Farmers' Bulletin No. 181 on "Pruning." This bulletin has just been reprinted by the Department. It contains a number of illustrations, showing the proper way to trim a fruit tree, and urges the advantage of proper and timely pruning. The winter is still here, but before some of us know it, the leaves will be out, and it will be too late to prune.

Last session of Congress passed a homestead law, affecting Nebraska, allowing 640 acres for an entry. This year three or four similar bills have been introduced one applying to a part of south Dakota and another one to Colorado. Word has been received, however, at the Public Lands Committee, that this is simply another raid on government lands in an attempt to secure large tracts of them by speculators and big stockmen. A South Dakota stockman stated, that he hoped the law would pass, as then young fellows could exercise their homestead rights and could sell to the stockmen for \$400 or \$500 each, while the latter would be able to get twenty or thirty thousand acre tracts of land cheap to run their stock on. These bills are being objected to by the people who propose that government lands shall be actually settled upon before title passes, and there is no question that should they pass, the President would veto them, as they are clearly against his expressed views on public land matters.

The Nebraska bill was passed as an experiment. As such it has demonstrated nothing, as it has not had time. The present flood of similar bills, appears to be simply an attempt on the part of the public land grabbing outfit to secure piecemeal, one State at a time, here and there, what they acknowledge, they cannot get in any general bill, asking the country to allow the taking up of 640 acre homesteads. It is freely stated that the Nebraska bill resulted in immense tracts of land passing into the hands of big stockmen through so-called 640 acre homestead entries by cowboys.

GUY E. MITCHELL.

POISON.

As far as shaving soap is concerned, common soap ought to be marked poison. Shaving is a special process and demands a special soap. If your face has been poisoned with cheap soap, if it burns and smart and itches, stop using the poison and use real shaving soap—Williams' Shaving Soap will cool and smooth your face and make shaving pleasant. The J. B. Williams Co., Glastonbury, Conn., offer in another column of this paper to send you a free trial sample. "For the sake of your face" read their ad.

In writing mention Southern Planter

IMPORTANT To Land-Owners.

Do you realize the importance of having a good map or plot of your land? I make a specialty of copying worn and faded farm, town lot and other maps, and to making maps and plots from metes and bounds as described in deeds. If you want old maps copied, mail to me, or if you want a map made from your deed, copy metes and bounds and mail to me.

DON'T PUT IT OFF.

After you have lost your old maps or they have become too badly torn and faded, it will be too late.

SPECIAL ATTENTION given to surveying and dividing large tracts of land in Virginia and North Carolina. My charges are: For maps, \$2 and up, according to size, and \$1 and up for calculating area. Mail me what you want done, and I will quote you price for same. DAVID T. WILLIAMS, Civil Engineer and Surveyor, 336 Main street, Danville, Va.

VIRGINIA PROPERTY

FOR SALE ON EASY TERMS.

Fine 228 acre farm, \$5,000. House, 3 tenant houses, large basement, barn, silo, ice house and dairy outbuildings; good fence; plenty fine water; 28 milk cows, bull, & heifers, 2 horses and 3 wagons; all kinds of machinery, separator and dairy equipment. \$200 income a month. If sold right away will take \$9,000 for everything just as it stands stacked, or will sell on easy terms. One mile from railroad station and small town. Send for catalogue of 50 other farms, \$500 up. All the above is near steam and electric railroad, and near Washington, D. C. J. F. JERMAN, Fairfax, Va. Phone connection.

To Home Seekers "Virginia, Her Agricultural and Industrial Resources,"

is the title of a new pamphlet issued by the Norfolk & Western Railway Co. We will gladly send you a copy. F. H. LA BAUME, Agr. and Ind. Agent, Roanoke, Va.

Northern Virginia,

Grain, Fruit, Dairy and Blue Grass Farms of every class within one hour of Washington, D. C.

LOUDOUN COUNTY
Farms a Specialty

Catalogue on application.

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Real Estate Brokers,
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OLD VIRGINIA

FARMS of every description. Good lands. Low prices. Liberal terms. Convenient to churches, schools and railroads. A very mild climate. Write for our new catalogue. VIRGINIA LAND AGENCY, Hickaday, Casselman & Co., Managers, Rockwood, Va. P. O. Box 257.

••• VIRGINIA FARMS •••

Nice little poultry farm, 100 acres, good house and orchard, \$500.00. Blue Grass, Stock and Fruit Farms. Address PORTER & GATES, Louisville, Va.

Farm For Sale

I have a 130 acre farm which I will sell on very reasonable terms, adjoining city of nine thousand inhabitants. Accessible to almost any church; also to good schools. Shipping point only very short distance from farm. About ninety acres under cultivation, and forty acres in good timber, pine and hard wood principally. New buildings in good condition, only four years old. House, eight rooms, with woodshed attached; good stable, granary and buggy shed. Farm in good condition. This property belongs to heirs, and has no incumbrances on it. Address all communications to Mrs. BERTIE ROOT, Elizabeth City, N. C., Box 105.

I Can Sell Your Real Estate or Business, NO MATTER WHERE LOCATED.



Properties and business of all kinds sold quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same.

A. P. TOLLE WILSON, Jr.,
Real Estate Specialist,
TOPEKA, KAN.

HALF INTEREST IN

A GOOD FARM

of 261 acres, FOR SALE. Fine cotton and grain farm; would like to sell to some one who will go into the cattle and poultry business and take charge of and run farm, etc. Cheap to the right man. For price and full description, address J. F. CLYBURN, Box 95, Lancaster, S. C.

SUPERIOR JAMES RIVER FARM

TO RENT.

400 acres; new 9 room dwelling, new barn 40x60, and other buildings; 30 acres in orchard grass, meadow grass and clover, 50 acres crimson clover and rye, 30 acres timothy, 3,000 bush, corn and a quantity of hay in the buildings. Nine miles from Richmond, two miles from electric railroad. JAMES BELLWOOD, R. F. D. 1, Manchester, Va.

WE CAN SELL

YOUR FARM

NO SALE, NO CHARGE.

If you want to buy, write for free catalogue.

R. B. CHAFFIN & CO., Inc., Richmond, Va.

Wanted to buy

a farm of about 75 or 100 acres, near Richmond preferred. Send price and situation to T. S., Box 385, Mystic, Conn.

WANTED

To rent, with the privilege of buying, a Virginia farm of 100-200 acres, near railroad station and town. Must be suitable for dairying and stock raising. Send particulars and terms to F. A. WEIHE, Raleigh, N. C.

RURAL FREE DELIVERY.

Editor Southern Planter:

Allow me a little space to give experience, instead of observation, on rural delivery. I am led to write after reading article from "The Sentry," in January issue. This revenue district paying the greatest revenue into the United States Treasury, was one of the first in which rural delivery of mail was tried. When this method was first introduced, it had many objectors, these persons foresaw difficulties, and arbitrary conditions, which experience has proven to be only imaginary. For more than five years, we have been receiving mail by the rural carrier, and were the question of continuing, or returning to the star route system, submitted to the patrons, we venture the vote would stand nine to one in favor of rural delivery. Its benefits are many, among which are a daily mail. Five daily papers are now taken and read by the farmers, for each one that was delivered under the old system. It brings the post-office to the gate of three-fifths of our farmers, within eighty rods or less, of one-fifth, and within a half mile of the remainder. This saving in time in going for, stopping a little while at the office and the return trip home, pays twice over the cost of any individual for free delivery. The certainty of getting all the mail received at the post-office up to the hour of departure of the wagon, and the regularity with which it is delivered, is a source of satisfaction. True, one by one, the small offices are discontinued, and in many instances it is a relief to the person acting as postmaster to get rid of a poor paying job. Many of these crossroads office were kept in private houses, and it was a perfect nuisance to have the neighbors come trooping in about mail time. In bad weather they must come in out of the storm, and sit around until the mail is distributed, and often some of these would remain for a little visit. Where it was not a private house, it was the village store, and here all felt free to come and stay as long as they wanted. In fact, it was often a general loafing place, and going for the mail was the excuse to get there. The inconvenience to the postmaster, and the loss of time to patrons by their journeys and waits, can never be equaled by standing in the roadside a few minutes once a month waiting to buy stamps or money orders.

A few years since a re-location of routes took the delivery from the door of certain patrons and compelled them to go a quarter or half mile for their mail; although some of these were original objectors to free delivery, when this change was made they were the loudest in telling of rights of which they had been deprived. Rural mail has come to stay. Each year it is more highly valued, because of the saving in time, the certainty of receiving mail promptly, the convenience of doing post-office business.

VIRGINIA LANDS

In Rockbridge and Bath Counties

FOR SALE

No. 30.—350 acres; 1 mile from Goshen, Va.; 200 acres of fine river bottom, not damaged by water. Old house, good granary, stable, etc.; fine spring, soft water. Terms: One-half cash, balance 1 and 2 years. A great bargain at \$6,000.

No. 27.—A fine brick and slate, 27 room hotel in Goshen, 2 wide porches run all round house, with roomy halls, large, well ventilated rooms; 2 acres lawn, nicely shaded; on corner Main street, 50 yards from depot. A beautiful house, and cheap at \$12,500; one-half cash, balance to suit purchaser. Reason for selling, too much other business.

No. 15.—Fine flouring mill property; building has 7,000 feet of floor space, 100 foot front, on corner Main and Water streets, Goshen, Va., 100 yards from C. & O. R. R.; 40 barrels capacity daily, boiler system; 2 acres town lots, 60x60 feet; lively barn, ice house, wagon, scales, etc. Reasons for selling, short of capital. A bargain at \$12,500; terms to suit purchaser.

No. 21.—Fine stock farm, 982 acres, in Bath county, 7 miles from C. & O. station; 400 acres closed in, nice soil, balance in oak and pine timber. Just discovered coal on place; 3 mineral springs, iron ore, etc. The greatest we have. Terms: One-half cash, balance 1, 2, 3 years, and cheap at \$10,000. Adjoining this farm is (No. 22) 1,000 acres, 250 cleared and in fine state of cultivation, balance mostly in original growth of white oak, enough timber to pay for farm. Both of the above have a great amount of fine timber. This is certainly a bargain at \$10,000, on terms to suit. We have a nice list of farms, summer resorts and town property for sale. Write at once for booklet. J. W. GUINN, Goshen, Va.

FARM LANDS.

The best locations, choicest lands in Virginia. Grains, Grasses, Fruit, Poultry, Dairy, Stock. For catalogue and further information, address

Real Estate Trust Co.,
RICHMOND, VA.

FOR SALE

one store house 22x41 on lot 50x100 feet. Poultry yard enclosed. 2 lots 80x100 feet each; Blacksmith's shop 20x30 feet, and stable. Garden lot enclosed. G. W. HARDY, Jeffress, Va. (Southern Railway.)

I Can Sell Your Farm....

If located in one of these Virginia counties: Prince George, Chesterfield, King William, Gloucester, New Kent, King and Queen, Hanover. Send description, stating price. JOHN JELINEK, 116 Pine Alley, Braddock, Pa.

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after shaving? Is it easy and pleasant? It depends on whether you use

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Sold everywhere. Free trial sample for 2-cent stamp. Write for "The Shavers Guide and How to Dress Correctly."

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We want to buy

Some Good Timberland

(White Oak preferred, but also Pine and other kinds of timber), no matter how large and how small tracts are. MEYER & JEHNE, Farmville, Va.

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Homes for ALL; Health for ALL; Happiness and Independence for ALL. ALL sizes of FARMS at corresponding prices, but ALL reasonable.

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\$3 PER ACRE AND UPWARDS
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GEO. E. CRAWFORD & CO., Richmond, Va.
Established 1878.

Go South.

For full particulars write
A. JEFFERS,
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FINE FARMS in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address
ALBEMARLE IMMIGRATION CO.,
SAM'L B. Woods, Pres. Charlottesville, Va.

ness at the front gate instead of at the end of a two or three mile journey. There may be objections and objectors, to rural mail delivery, but they don't live along any of the routes that have been in operation for the past five years.

Peoria Co., Ill.

H. C. H.

HINTS BY MAY MANTON.
BLOUSE WAIST, 4914.

Waists that are shirred over the shoulders are among the latest and most novel shown, and are singularly attractive in such materials as chiffon veiling, chiffon taffeta and the like. This one is made in shirt waist style with a box plait at the centre front, the material being taffeta in one of the new reseda greens. The sleeves are shirred to form cuffs in harmony with the waist, and are finished with pointed turn-overs that match the stock.

The waist consists of the fitted lining, fronts and back. The shirrings over the shoulders are intuck style so providing becoming fullness below, and the closing is made at the centre front through the box plait. The sleeves are made in one piece each, with the shirred cuffs.



4914 Shirred Waist, 32 to 40 bust.

The quantity of material required for the medium size is $4\frac{1}{4}$ yards 21, $3\frac{3}{4}$ yards 27 or 24 yards 44 inches wide.

The pattern 4914 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure.

GIRL'S RUSSIAN DRESS 4938.

Russian dresses are always attractive worn by little girls and always possess a certain smartness of their own. This one is eminently simple and is adapted to a variety of materials. As illustrated it is made of blue linen with banding of embroidery, but is adapted to all simple childish ma-



When you see the above label on Double and Single Shovel Plow Steels, it's a positive guarantee of good quality. Don't be satisfied with an imitation, but insist on your dealer furnishing you the genuine. Made only by Brown Manufacturing Co., Zanesville, Ohio.

ANGORA GOATS...

Having sold the entire flock offered in last issue, I hereby offer below several lots of pure bred Angoras—all young, in good condition, and long hair. These goats are thoroughbred, but not registered. First order gets each lot.

Lot No. 1. 1 young Buck and 3 young Does; does already bred to buck not akin. Good size, good hair, the lot f. o. b. Richmond, carefully crated at \$45.

Lot No. 2. 1 good young Buck and 4 good young Does. Bred to buck not akin. Price for the lot delivered f. o. b. Richmond, \$50.

Lot No. 3. 1 good young Buck and 2 good young Does, bred to buck not akin. The lot crated f. o. b. Richmond, \$32.50.

Lot No. 4. 1 good young pure bred Buck and 2 high grade Does. This lot at \$30.

The above lots are all young and healthy, of good size and pure white. These lots will not be broken, but must be taken as they are. If any lot ordered is sold, your money will be promptly returned.

ROBERT C. BRAUER,
Live Stock Commission Salesman,

PENS: UNION STOCK YARDS,

Richmond, - - - Va.

Address Box 204. Phones 82 and 2126.

All kinds live stock sold on commission.

Angora Goats...

"The Wealth of the Wilderness." A 32 page pamphlet, by Geo. Edward Allen. Price, 35c. It's worth it.

THE SOUTHERN PLANTER, Richmond, Va.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Chitty, Ky.

\$24.00 WEEKLY

For man with rig to introduce Royal Stock and Poultry Remedies; we mean business and furnish best of references. ROYAL CO-OP. MFG. CO., Dept. S. 2, Indianapolis, Ind.

In writing mention Southern Planter

HORSEMEN.



You who in the past have suffered such severe disappointment and financial loss from Spavins, Ringbones, Curbs, Splints and other forms of lameness, try a bottle or more of

KENDALL'S SPAVIN CURE

and watch results. It never fails in such cases.

Florence, Mo., February 19, 1904.

Dr. B. J. Kendall Co., Knoxville, Tenn., Va.
Gentlemen:—I have used your Kendall's Spavin Cure for Spavin, Ringbone, Side-bone and a lameness of all kinds. Also lameness a result with good results. I feel it good for both man and beast. Have used a lot of your medicine. Yours truly, M. J. BEALL.

Price \$1; 6 for \$5. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

terials, wool as well as cotton and linen.

The dress consists of front and back and is fitted by means of shoulder and under-arm seams. The fullness at the waist line can be arranged in gathers or left free, confined by the belt only, as may be preferred. The



4938 Girl's Russian Dress, 4 to 10 yrs.

sleeves are wide, full at both shoulders and wrists and finished with straight cuffs.

The quantity of material required for the medium size (8 years) is 3½ yards 27, 3¾ yards 32 or 2¾ yards 44 inches wide.

The pattern 4938 is cut in sizes for girls of 4, 6, 8 and 10 years of age.

We can supply the above patterns at 10 cents each. SOUTHERN PLANTER.

ELKHART, IND.

A good many people know this town because every Lake Shore passenger train stops there to change engines. Even the famous 20th Century Limited which does not enter the large city of Buffalo, N. Y., and passes through a great many other large places without stopping, halts for a few moment's rest at Elkhart. But many thousands more know Elkhart because it is the home of the famous Elkhart Buggies, and thousands upon thousands of these sterling vehicles are in daily use all over the country and abroad. For thirty-two years the Elkhart Company has been selling their product direct from the factory to the consumer. Their Catalogue is most complete, showing over 200 styles of vehicles and 65 styles of harness. It is gladly sent free to any reader of this paper who will write for it. Address Elkhart Carriage and Harness Manufacturing Co., Elkhart, Ind.



GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a **HUMAN REMEDY** for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio

Horsemen, DR. TURNBULL'S CURINE.

The Great American Veterinary Remedy.



A SAFE AND POSITIVE Cure for Spavin, Splints, Curbs, Ringbones, Bony Growths, Rheumatism, Sprung knees, Lameness of all kinds, etc.

It is the most powerful pain killer, and cures all Cautery or Firing. NO BLEMISH!

Its effects are ABSORBENT, ALTERATIVE, PENETRATIVE and ANTISEPTIC, and it will reach the deepest seated trouble. For sale by all dealers.

H. S. BOSSART & CO.,

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Price: Large Bottles, \$2; Small Bottles, \$1.

Send 2c. stamp for our \$6 page Little Giant up-to-date book on the principal diseases of the horse, causes, symptoms and treatment, with testimonials and directions for CURINE.

GIBSON'S LICE KILLER,

Kills Lice on Fowls, Cattle, Hogs and Horses.

Easily Applied, and Sure Death to all Lice.

Your Money Refunded if it Fails.

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Half gallon can, 60c.; gallon can, \$1.00.

GIBSON & LAMB, West Alexander, Pa

Lump Jaw

Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use

Fleming's Lump Jaw Cure

No trouble—no pain. No risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free book tells you more.

Spavin and Ring-bone

Once hard to cure—easy now. A 45-minute treatment does it. No other method so easy—no other method sure.

Fleming's Spavin and Ringbone Paste cures even the worst cases—none too old or bad. Money back if it ever fails. Free Illustrated book about Lump Jaw, Spavin, Ringbone, Splint, Bog Spavin and other stock ailments. Write for it.

FLEMING BROS., Chemists,
280 Union Stock Yards, Chicago, Ill.



NEWTON'S Meas, Cough, Dis temper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. 30-day guarantee. \$1.00 per can. Dealers, Mail or Ex. and The Newton Remedy Co., Toledo, Ohio.

NO MORE BLIND HORSES.

For Specific Opacities, Moon Blindness, and other Sore Eyes, Barry Co., Iowa City, Ia. have a sure cure.

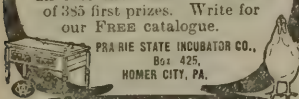
..Second Hand Bags..

Wanted. Any kind, any quantity, anywhere. I pay the freight. GEO. T. KING, Richmond, Va.

PRAIRIE STATE INCUBATORS AND BROODERS

Measure their success by the success of users. Twenty incubators sold first year; 20,000 sold in 1903. Went all over the world. Winners of 385 first prizes. Write for our Free Catalogue.

PRAIRIE STATE INCUBATOR CO.,
Box 425,
HOMER CITY, PA.




INCUBATOR

Johnson started his new Pay-for-itself hatcher just year and raised a run-pus with high prices. Don't get fooled. Put your trust in **Old Trusty**.

The incubator that is sent on **40 Days Trial** Five Year Guaranteed.

The training he got making 50,000 other incubators enabled him to make "Old Trusty" right. Every user says it's right. No other incubator ever got in first rank the first year. You should get Johnson's Free Catalogue and Advice Book. He wrote it. Makes his success your success.

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WITHOUT CHARGE and guarantee you success if you use **MODEL**

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tells how to make money - It is a book that tells how to get rich by selling goods when prices are high. How to make a profit on such. How to find for heavy loads. How to make money. Why not get an adequate return from poultry? Why not try modern methods this year? Why not learn about incubators and brooders from a firm who have been in business 40 years, and who know how to make satisfactory machines? Write us for the book today. It's free.

GEO. ERTL CO.,
Quincy, Ill.



YOU BUILD IT YOURSELF

We tell you how to do it, show views of machines built at home and many letters from satisfied customers. In our new book "How to Make and Save Money with Incubators and Brooders." Built of good things. Invaluable to the beginner. You save half the cost of your incubator. None but a better. Get the Book and know for yourself. It's free for the book today. It's free.

CHANNON, SNOW & CO. Dept. 358 Quincy, Ill.



A GOOD OLD HORSE REMEDY.

As long as the horse does its work there is no occasion to change. This is the doctrine that has been acted upon by a whole generation of users of a horse remedy that is being advertised in our columns. We refer to Kendall's Spavin Cure, the preparation of the Dr. B. J. Kendall Co., Enosburg Falls, Vt., though it is hardly necessary to tell readers of this paper where or by whom Kendall's Spavin Cure is made. The most common ailments of horses are very similar from year to year, spavin, curbs, ringbone, and splints are characteristic horse ailments. What is found to be a good method of treatment in one case, even a generation ago, is good still. Kendall's Spavin Cure is, beyond question, such a remedy. We had almost said the remedy. As these common horse ailments, the ones coming up most frequently to be treated, do not change. It is the same remedy that was discovered by the great veterinarian thirty years ago. Its use has been continuous, always widening out until it has become the Standard remedy for horse owners in many countries besides our own. Nothing could more emphatically attest its virtues. It is a remedy that no horse owner should be without. All druggists handle it. The Kendall Company's book, "A Treatise on the Horse and his Diseases," helps out of many a tight place. It enables you to know your horse and to treat intelligently most every case. It may be obtained at the drug store, or will be mailed free if you address the company as directed in the advertisement.

NOT PREMEDITATED.

Justice of the Peace: "What do you mean by saying it was not premeditated, 'Rastus'? You acknowledged that you broke into the plaintiff's hardware store and stole a bunch of keys."

"Rastus: 'Yassuh; but dat wuzn't mah fault, Jedge. Mistah Smiff put locks on his chicken coop dat none ob mah keys would fit, an' dere wauzn't no udder way ter fit it widout his heahin' me 'ceptin' by borerrin' dem keys. Yassuh; dat's he truf.'—Judge.

HUGENOT POULTRY YARDS.

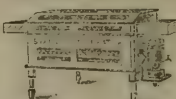
Attention is invited to the advertisement of above yards. Dr. J. B. Bas-kerville, the proprietor, makes a specialty of White and Buff Wyandottes, Single Comb Buff Orpingtons and Mammoth Bronze Turkeys, all raised on blue grass farm; good stock and satisfaction guaranteed, is the one way these yards do business.

Ethelinda—Maud Wintergreen is telling her friends that she could have got Jack Bignum if she had only said yes.

Guendolen—That's what Jack thought, and he never gave her a chance to say it.

Incubators on Thirty Days Trial.

The kind that cannot fall—the world's best. We manufacture the largest and most complete line of first class business incubators and brooders in the world. Handsome Illustrated Catalogue and Poultry Guide free. Address **STANDARD F. C. INCUBATOR CO.,** Dept. G., Rochester, N. Y.



POULTRY PAYS

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100 Egg Incubator,

made by George H. Stahl, for sale, or will exchange for pure-bred Poultry or Poland China Pigs. Machine as good as new; only used one season.

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...that is hatched in

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come in the number and are healthy and strong. Anyone can see why if they read our catalogue. Even hatch and raise chickens do the work right. Catalog is Free, Ask for it. Iowa Incubator Co., 222 E. Locust St. Des Moines, Ia.



Build Your Own Incubator.

PLANS FREE for building the famous Economy. All fixtures furnished; also incubators at almost one-half price. Catalogue free. **ECONOMY CO.,** Harrisonburg, Va.

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NEW OR SECOND-HAND;
SOLD OR RENTED.
Write for prices.

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Barred Plymouth Rock Cockerels.

We have a fine lot of young cockerels for sale; healthy, vigorous birds. Careful attention has been paid to cross-breeding and selection of our Barred Plymouth Rocks, and we do not believe there is better laying, more vigorous and healthy stock anywhere in the country. Our cockerels are just the kind of stock poultrymen like to get to infuse new blood into their flocks. Price of cockerels, \$1.50 and \$2 each; the latter price for extra select cockerels. Price includes crates and delivery to Express Co.

EGGS FOR SETTING, \$1 per setting of 13 eggs.

We have also a few first class **WHITE** and **SILVER LACED WYANDOTTE COCKERELS**; price, \$2 each.

PRICE OF EGGS FOR SETTING: WHITE and SILVER LACED WYANDOTTE, \$1.50 per setting of 15 eggs.

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P. O. Box 230. Richmond, Va.



Money in Chickens.

60,000 poultrymen, women and farmers are making money raising chicks with our machines for the early market. Early chicks bring the big prices. Our big book tells how to breed, feed, hatch and grow chicks for profit. It illustrates great poultry farms where Champion Incubators and Brooders are used. Big money from small investment. We are the largest brooder manufacturers in the world. 100 chick brooder only \$6.50, 120 egg incubator, \$16.50. Book is free.

J. A. BENNETT & SONS CO.,

405-411 Main Street,

GOVERNOR, N. Y.



CAN BOYS BE TRUSTED WITH GUNS?

At a meeting of the Benedict's Club in Philadelphia the other day, a heated discussion arose over the question of whether boys should be allowed to handle firearms. The argument was precipitated by one of the members, who owned a country residence, remarking that he would not trust his youngsters with guns. This brought an energetic looking member to his feet with the reply, "I can't say I agree with my friend * * * I wouldn't give a snap for a boy that couldn't be trusted with a gun. As for me, I want to see my boys grow up into men—responsible, clear eyed and steady of nerve, and I don't believe there is anything more potent to this end than to give a boy a good, reliable gun and turn him loose in the open country. I have three boys, ranging in years from eight to fifteen, and each has his rifle and shotgun. The oldest has used his for five years and has not done any damage yet, and in that time, my acres have never required a scarecrow."

This point of view is on a line with the educational movement being carried on by the J. Stevens Arms and Tool Company, of Chicopee Falls, Mass., manufacturers of the famous Stevens Rifles, Shotguns and Pistols. We have just received a copy of their "Book on Out-Door Sports" which deals not only with Stevens Arms, but contains many valuable articles on various subjects of interest to lovers of out-door life. We understand these people are charging nothing for the book, but send it to applicants upon receipts of four cents in stamps to cover postage.

A NEGLIGIBLE QUANTITY.

"But how did you manage to make so much money when you had only one oyster stew to serve?"
"Oh," replied the pretty church-fair waitress, "you see, every time we served it it was sent back."—February Lippincott's.

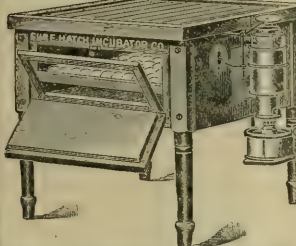
HAD IT ON HIS PERSON.

A pupil in a Lynn, Massachusetts, school was asked by his teacher to give the definition of a vacuum. "I can't just describe it," said he, "but I have it in my head."—February Lippincott's.

SURE HATCH INCUBATORS

Hatch Chickens Every Time; Hatch Live Chickens; Hatch Every Fertile Egg

Cost little to run. 30 cents in oil brings off a hatch. Easy to operate—a child can do it. Make big money on small investment. Last a lifetime. Built of California redwood. Three walls, asbestos lined; solid as a rock, yet very light. California redwood never swells or shrinks, warps or cracks.



Asbestos is the proper lining for in-bators—reflects heat from top of machine onto the eggs. Mother Nature way. Have 12-ounce cold-rolled copper pipe heating system; makes steady, even heat all around sides and over top. Copper water heater has 18 square ins. heating surface; largest heating surface ever put on an incubator, insuring perfect temperature at minimum cost. Regulator on inside of machine, already adjusted. Cannot be knocked out of position or broken. Everything about the Sure Hatch Guaranteed by \$100,000. The Sure Hatch is

SOLD ON 60 DAYS' TRIAL

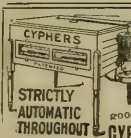
which gives you an opportunity of taking off two hatches, and thoroughly trying machine. Over \$50,000 in use and giving satisfaction.

Just-see actual size 120, with all improvements worth having on an incubator, shipped to your station, freight prepaid east of the Rocky Mountains, for **\$10.00**

Most liberal offer ever made by any concern. Send \$10.00 and we will ship machine at once. You have privilege of trying same for 60 days. If not satisfactory money will be refunded. Shipments can be made immediately. If you live east of the Mississippi river, address Indianapolis, Ind. If west, Clay Center, Neb.

Free Catalogue now ready. Address

Sure Hatch Incubator Co., Box 87, Clay Center, Neb.; Box 1087 Indianapolis, Ind.



Standard Cyphers Incubators

are guaranteed to hatch more and healthier chicks with less oil and less attention in your hands than any other, or your money back. Absolutely automatic and self-regulating. Used and endorsed by 45 Government Experiment Stations and by America's foremost poultrymen. Complete "Catalogue and Poultry Guide, 212 pages (bail.) more than 600 illustrations. FREE, if you send addresses of two neighbors who keep good poultry and mention this paper. Address nearest office.

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Sold direct to purchasers at lowest prices. **NO AGENTS.** Latest double-wall 250 Egg Nursery Incubator and Brooder. Everything complete, with Disinfectant Plans, for \$28.00 cash. **Satisfaction guaranteed.** Refer to *Success*, *Delaware City National Bank*, *Delaware City House and Brooder Plans*, etc. Large 150-page Poultry book, 50c. Prompt shipment of anything ordered.

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THE FRUIT-GROWER

A paper devoted to fruit culture, with a garden department. We will publish in March, 1905, a special "Gardening" number full of "meat" for gardeners and farmers. Subscribe now and get information worth hundreds of dollars in profit. This is one of four "1905 Specials" on "Spraying," "Apples" and "Small Fruits." Subscription, 50c yearly. Send 25c and names of 10 persons interested in fruit-growing, for a year's trial. Write us how to get our ten "Bro. Jonathan Fruit Books" free. Eastern edition for States east of Ohio. **The Fruit-Grower Co., 1032 S. 7th, St. Joseph, Mo.**



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BREEDER OF

S. C. WHITE LEGHORNS, Exclusively.

\$1.00 per sitting of 15 eggs.

EWING, VA.



"The hen that lays is the hen that pays"

White Wyandottes.

EDGEWOOD STOCK FARM.

This breed EXCLUSIVELY. We can offer you in the Edgewood strain something profitable. Better try us. Pullets and cockerels for sale. If you want PULLETS, better get orders in quick. H. B. ARBUCKLE, Maxwellton, W. Va.

♥♥ EGGS FOR HATCHING. ♥♥



15 for \$2.
B. P. Rocks (Bradley Bros. birds), worth \$3 sitting
Also S. C. B. Leghorns, 15 for \$1.50.

Our birds in respect to size, beauty of mark and as layers, are the finest to be found anywhere without exception. From stock that has taken more first prizes than any birds in this country.

Try a sitting stock for sale.
STRAWBERRY HILL POULTRY YARDS,
Box 287, Richmond, Va.

CHOICE EGGS AND FIRST-CLASS STOCK.

White Wyandottes, Jones' and Biltmore strains. Barred P. Rocks, celebrated Thompson "Ringlets." Rose Comb White Leghorns, Babcock and Biltmore strains. From prize winners and best winning blood. Prices to suit and quality the best. Eggs and stock for sale. A few extra choice White Wyandotte and R. C. W. Leghorn Cockerels. "Snow Balls" for sale to quick buyers. Write me your wants at once. E. C. NEWTON, Pee Dee Poultry Farm, McCall, S. C. R. F. D. No. 2.

COCKERELS.

A few choice B. P. Rock, White Wyandotte and S. C. B. Leghorn, also Leghorn Hens. Some large handsome M. B. Toms. All of fine pure bred stock. Write

MISS CLARA L. SMITH,
Croxton, Caroline Co., Va.

REPORTS.

U. S. Department of Agriculture, Washington, D. C. Bureau of Chemistry. Bulletin 88. The Chemical Composition of Apples and Cider. Bureau of Plant Industry. American Varieties of Lettuce. Bureau of Plant Industry. Bulletin 71. Soil Inoculation for Legumes. Bureau of Soils. Circular 14. Opportunities for the Production of Cigar Leaf Tobacco in Texas and Alabama. Office of Experiment Stations. Experiment Station Record, Vol. XVI, No. 4.

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Illinois Experiment Station, Urbana. Ill. Bulletin 95. The More Important Insect Injuries to Indian Corn.

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Bulletin 155. Silage vs. Grain for Dairy Cows.

Columbus Horticultural Society, Columbus, O. Journal of the Society December, 1904.

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Bulletin 114. A Lesson in Bovine Tuberculosis.

Bulletin 115. The Quality of Cheese as Affected by Rape and Other Green Forage Plants Fed to Dairy Cows.

Bulletin 116. On the Relation of Food to the Production of Milk and Butter Fat by Dairy Cows.

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Bulletin 118. Licensed Commercial Feeding Stuffs.

Virginia Weather Service, Richmond, Va. Report for December, 1904.

Philippine Bureau of Agriculture, Manila, P. I. Farmers' Bulletin 12. Abaca (Manila Hemp).

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

HEATWOLE'S BOOK ON POULTRY



Worth dollars in thousands of homes. Tells you how to treat diseases, feed and care for Poultry with success. It illustrates and tells all about over 45 varieties farm raised THOROUGHbred FOWLS, and quotes most reasonable prices on stock and eggs. Mailed for \$6. in stamps.

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To whom it may concern:—Mr. J. E. Heatwole, breeder and shipper of fancy poultry, is personally known by me, and by the public generally. He is thoroughly reliable and can be depended on. Yours truly,
GEO. E. SHUCE.

BUFF ORPINGTON'S FREE.

To the person hatching largest per cent. of our eggs we will give free a fine pair Orpingtons. Eggs at 10c. each, or in lots of 50, 8c. each. A limited number of cockerels at \$1.50 to \$3 each. No pullets. 25 POLAND CHINA pigs, sired by "Ooconeechee," \$4 to \$6 each. Satisfaction always. OOCONEECHEE FARM, Jeffers, Mecklenburg Co., Va.

SILVER-LACED WYANDOTTES.

Strong, healthy, farm-raised birds. Orr's rain, fine plumage—Cockerels, \$1.25; females, \$1.00. Order early so as to get first choice. Satisfaction to every customer or money refunded. Eggs in season, \$3.00 per sitting.

Dr. H. H. L. E.
R. F. D. No. 2, Lexington, Va.



EGGS FOR SITTING

From pure bred poultry—Barred Plymouth Rocks, Rose Comb Rhode Island Reds, Buff Orpingtons, White Wyandottes, S. C. White Leghorns. Fine lot of Cockerels and pullets for sale. RIVERSIDE POULTRY YARDS, G. H. SHOOK, Prop., R. F. D. 1, Eufaula, N. C.



BARRED PLYMOUTH ROCKS, PARTRIDGE COCHINS, B. S. RED GAMES, WHITE WYANDOTTES, S. C. WHITE AND BROWN LEGHORNS, S. C. RHODE ISLAND REDS, choice stock for sale. Eggs \$1 for 15, \$1.75 for 30. RIVERSIDE POULTRY FARM, J. M. Coffman & Sons, R. F. D. 19, Dayton, Va.

White Plymouth Rocks.

A lot of really good cockerels and pullets for sale cheap. These are from the best stock in the country, and are thoroughbred. Sold out Brown Leghorns. R. W. HAW, JR., Centerville, Va.

S. B. C. Leghorn

Cockerels at \$1. They are perfectly bred. Could be no better. Orders booked for eggs. 15 for \$1. Seed Potatoes for sale. W. S. GUTHRIE, Childress, Va.

LEGHORN POULTRY FARM



Has for sale S. C. White, Leghorn Eggs for setting purposes, at \$1 for 15; \$2.50 for 50; \$5 per 100; also a few White Wyandotte eggs at same prices. These eggs are from prize winning stock, and will guarantee them to be just as represented. Address A. T. MATTHEWS, Box 36, Parkley, Va.

FIRST CLASS

EGGS AND STOCK

My prices will please all as will the quality. Some first prize birds in my flock. BUFF and WHITE ORPINGTONS, WHITE and BROWN LEGHORNS, GOLDEN, SILVER and WHITE WYANDOTTES, B. P. ROCKS, LIGHT BRAHMAS and S. S. HAMBOURG. I sell a splendid Brooder at \$3.50.

O. E. SHOOK, R. F. D. 1, Waugh, N. C.

Valley Farm.

S. C. B. Leghorns.

(FORSTH STRAIN)

BARRED ROCKS.

Stock and Eggs which will please you for sale. Write me your wants. CHAS. C. WINE, Mt. Sidney, Va.

TEN TRIOS

Buff Leghorns,

the best layers, beautifully marked, from strains which layed 210 eggs a year. \$5 a trio.

SUPERB BRONZE TURKEYS from the best pens of the country. Trio, \$10; hens, \$3 each. Toms, \$4 to \$5 each. Satisfaction guaranteed. A. R. VENABLE, JR., Farmville, Va.

ROSE COMB

Brown Leghorns.

The Leghorns lay the eggs. We keep Rose Combs because they do not freeze. Our stock is choice. Eggs at \$1 for 15. RANDOLPH SPENCER, Presb. Orphan's Home, Lynchburg, Va.



Barred Plymouth Rock

EGGS for hatching, carefully packed \$1.00 for 15; \$1.75 for 30; \$2.25 for 45 and \$4.00 for 100.

MRS. CLARA MEYER, Farmville, Va.

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T. W. Wood & Sons, Richmond, Va., Seedsmen. This firm, the oldest established in the South, and doing the largest business in that section of country, has issued a splendid catalogue of their seeds, roots and plants, including a number of new varieties. The constant growth of the business of this house is a testimony to the quality of the seeds and plants they send out. Copy will be sent on application.

J. M. Thorburn & Co., Seedsmen, Cortlandt street, New York city. This one of the oldest, if not the oldest, seed house in the country, has issued a beautiful catalogue characteristic of the house.

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Arthur Cowee, Berlin, N. Y. Catalogue of New Hybrid Gladioli, a fine flower for Southern gardens.

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S. W. Anderson, Blaker Mills, Va. Catalogue of Hereford cattle of fine breeding and strains. See advertisement.

The M. M. Johnson Co., Clay Center, Neb., issues a large catalogue of the old Trusty Incubator and brooders. Send for this catalogue before buying. Sure Hatch Incubator Co., Clay Center, Neb. This Incubator has been on the market several years, and is well known and appreciated. Send for catalogue.

Truss & Cable Fence Co., Cleveland, Ohio. A very artistic catalogue of a good fence.

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Latham & Co., Sandusky, O. Spraying Machines and fittings. Consult this catalogue for information on this subject.

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MAMMOTH BRONZE TURKEYS,
SILVER LACED WYANDOTTE

and B. P. ROCK CHICKENS.

November, 1904, my pen of turkeys won first prize at Herald Square Show, N. Y. All fowls farm raised. Satisfaction guaranteed or money refunded. J. G. BUFORD, Dublin, Va.

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S. L. WYANDOTTES, B. and W. ROCKS, S. C. W. LEGHORNS, S. and R. COMB BROWN LEGHORNS; also PEKIN DUCKS, \$1 each. Eggs in season. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

Echo Farm Poultry.

S. B. LEGHORNS,

Best laying strains; eggs for hatching, \$1 per 15; \$6 per 100. Can furnish 100 from one day's laying. WHITE HOLLAND TURKEYS, Eggs from prize winning strain, \$2.50 per 11. Everything guaranteed as represented. Stock all sold. Prompt shipment. CAL. HEUSSELMAN, R. F. D. 6, Richmond, Va.

Barred Plymouth Rocks

—AND—

S B. C. Leghorns,

laying strains. A few more grand Cockerels for sale. Satisfaction guaranteed. Mrs. JNO. F. PAYNE, Clairmont Dairy Farm, University of Virginia.

A NICE LOT OF PURE-BRED

S. C. W. LEGHORN

cocks and cockerels (Biltmore prize winning strain), for sale at \$1 each.

S. C. W. LEGHORN and B. P. R. eggs for sale in season, at 75c. per sitting or 3 sittings for \$2.00. Apply to Mrs. F. E. WILLIAMS, Charlottesville, Va.

RICHMOND'S BEST BREEDS

won at Hagerstown, Richmond and Atlanta. Eggs from prize winning WHITE BUFF and BROWN LEGHORNS, WHITE and BLACK MINORCAS, B. P. ROCKS.

FLYING HOPPER PIGEONS,

each variety raised by a SPECIALTY BREEDER on his own yard. C. G. M. FINK, R. F. D. 2, Richmond, Va., representing Richmond breeders.

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BARRED, RUFF and WHITE PLYMOUTH ROCKS; SILVER, WHITE, BUFF and PARTRIDGE WYAN OTTES; BLACK MINORCAS; BLACK LANGSHANS; LIGHT BRAHMAS; RUFF and PARTRIDGE COCHINS; WHITE and BROWN LEGHORNS.

EGGS, 15 for \$1; two-thirds hatch guaranteed or sitting duplicated at half price. OAKLAND POULTRY FARM.

C. J. WARNER, Mgr., Ruffin, N. C.

E. F. SOMMERS, - Somerset, Va.

Breeder of the finest line bred

Barred Plymouth Rocks

exclusively for 15 years. Write to me for what you want. Am sure can please you. My birds have been bred for laying qualities as well as shape and plumage. Cockerels and pullets, \$1 to \$2; eggs, \$1 per set of 15; 2 sets, \$1.50; M. B. Turkey eggs, \$3 per doz.

PURE-BRED Barred Plymouth Rock —AND— Orpington Cockerels.

LANGSHAN Cockerels and hens. Eggs in season. G. W. HARDY, Oakley, Va. Shipping Point, Jeffress, So. Ry.

A FEW COCKERELS AND PULLETS OF S. C. B. ORPINGTONS and W. WYANDOTTES.

Get your Turkeys early and you will get double as many eggs. None better than OAKSHADE M. B. TURKEYS. Send for price list. HUGUENOT POULTRY YARDS, Dublin, Va.

"Business Fowls."

That is What Ours Are.

S. C. WHITE and BROWN LEIGHORNS, WHITE WYANDOTTES, BARRED PLYMOUTH ROCKS. Eggs for hatching; orders now booked and filled in rotation at \$1 per 12. FIEDMONT HEIGHTS FARM, F. C. Louhoff, Propr., Yancey Mills, Va.

A FEW CHOICE

Barred Plymouth Rock

Cockerels, pairs, trios and pens. Mated for best results. B. P. R. EGGS by the sitting or hundred; also PEKIN DUCK eggs. I have been in business for 17 years, and my birds are high bred and give satisfaction, which I guarantee. CHARLIE BROWN, Arlington Farm, Cartersville, Va.

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Black Devils and Red Cubans.

Where they won, Sharon, N. Y., 4 out of 5 Blue Rock, Pa., 2 out of 3. Clarion, Pa., 1 straight. Reanoke, Va., 8 out of 9. Akron Ia., 2 straight. Eggs, \$2 per sitting. Young, trios, equal size, \$1.

THOS. W. JARMAN, Yancey Mills, Va.

PURE BRED

BARRED PLYMOUTH ROCKS,

exclusively. Strong, healthy, vigorous farm raised stock, bred for laying. Eggs, 75c. for 15.

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Rose Comb

WHITE LEIGHORNS and WHITE WYANDOTTES for sale. Good stock. Eggs in season. \$1 for 15. J. W. NICHOLS, Grove, Va.

I still have a few very choice

BUFF ORPINGTON

and R. C. W. Leghorns, Cockerels for sale. Also can book orders for eggs.

T. M. KING, "Queensland Farm," R. F. D. No. 2, Hagan, Lee Co., Va.

This may interest You.

My BARRED ROCKS are stock-improving, blue-barred-to-akin kind. Closely related to New York Prize Winners. Eggs in season. L. W. WALSH, Box 124, Lynchburg, Va.

In writing mention Southern Planter

MAGAZINES.

The Century for February has four color insets: two of Vesuvius in action, by Corwin K. Linson, accompanying an article by him on his experiences at the crater; one reproducing a newly discovered fresco at Pompeii, representing the mythical origin of Rome, the text by Prof. Ettore Pais, the distinguished Italian archaeologist, who unearthed the fresco; and the fourth another of Anna Whelan Betts' drawings in color of old-time scenes, called "The Valentine."

Two rulers now much in the public eye come in for authoritative description: one the Emperor William in an anecdotal paper by Andrew D. White, giving his personal impressions of various aspects of this remarkable and many-sided man, and the other the Emperor of Korea, who is the subject of a paper dealing with himself and his country, by his former adviser, W. F. Sands, of Washington, and accompanied by a portrait of the Emperor from life by Hubert Vos. "The Conflict in Finland," by David Bell McGowan, is a timely and intelligent account of the situation in that unhappy country, with portraits of the chief figures, Plehve, Bobrikof, Schumann, Mechelin, Wolf and others.

American topics are: "The Boston Symphony Orchestra" and its founder, Henry L. Higginson, the first authoritative magazine article on this organization, by Richard Aldrich, musical critic of the New York Times, with a portrait of Mr. Higginson by Sargent, etc.; "Chicago's New Park Service," by Henry G. Foreman, president of the South Park Commissioners, with drawings by Guerin, and "The Everglades of Florida: A Region of Mystery," by Edwin Asa Dix and John N. Macgonigle, a narrative of exploration into this fascinating and little known territory.

There are six pieces of American fiction, including the third part of "Sandy," the new story by Mrs. Rice, author of "Mrs. Wiggs of the Cabbage Patch," and "Love Mary," in which the plot thickens and the life of a Kentucky village is graphically portrayed.

There seems to be even more than the usual generous store of good stories in the February St. Nicholas. Besides exciting chapters of "Queen Zizi of Ix" there is a splendid tale of and for boys by Anna Parmley Paret, "The Founding of the B. A." The illustrations include a facsimile of a letter from General George Washington to Brigadier-General Foreman, never before printed. Then there is an altogether delightful Valentine story, entitled "Pinkey Perkins." Elizabeth Elliot recounts the pretty story of "Hetty MacDonald's Birthday Party," a story to appeal to every girl and her mother. "An Alaskan Journey with Reindeer" is a spirited story of travel under exciting conditions. And "What Walter Saw in

INGLESIDE POULTRY FARM.

Some choice

M. B. TURKEYS

FOR SALE.

Toms, \$5; hens, \$2.50. Crated and on car. Farm near Alderson, W. Va., on C. & O. R. R. Address Mrs. SALLIE H. ANDERSON, Blaker Mills, W. Va.

Mammoth Bronze Turkeys

for sale by the leading turkey raiser in the South. The birds are perfect specimens of this strain. Orders placed now gets choicest birds. Demand every year exceeds supply, so order at once. Rates and terms on request. FIEDMONT POULTRY PLACE, Miss E. CALLIE GILES, Propr., Whittle's Depot, Va.

A FEW MORE

M. B. TURKEYS AND B. P. ROCK

Cockerels for sale. Eggs from B. P. Rocks and S. C. White Leghorns in season. C. T. JOHNSON, Beaver Dam, Va.

Mammoth Bronze Turkeys,

bred from 40-pound gobbler, and 25-pound to 30-pound hens. Also GENUINE WILD TURKEYS, domesticated.

R. L. BLANTON,

Stoddert, Va.

Rhode Island Red and White Wyandotte

fowls; also a few extra good BUFF ORPINGTON COCKERELS. Eggs in season. JOHN W. MORRIS, Waldro, Va.

A FEW Buff Wyandotte

Cockerels of Dr. Sanford's 196 egg strain. MISS C. J. TAYLOR, R. F. D. 3, Charlottesville, Va.

BLACK MINORCA

and WHITE PLYMOUTH ROCK Cocks for sale at \$1 each. Mrs. A. G. HILL, Huon, Louisa county, Va.

BERKSHIRE PIGS,

eligible to registry.

MAM. BRONZE TURKEYS, S. C. BLACK MINORCAS,

all pure bred. Eggs, per sitting: Turkey, \$5; Pekin Duck, \$1.50; Black Minorca, \$1.50. TUCKAHOE FARM, Box 360, Richmond, Va.

DICK REYNOLDS

IS NOW HOLDING COURT

at the Cedars Farm. Best bred German coach stallion in Virginia. Fee, \$10. Return privilege. Jersey Cattle, Dutch Jersey Swine, M. B. Turkeys, B. P. R. Chickens, Llewellyn Setters, Beagle Hounds. Early Chickens are the best. Better order eggs at once. THE CEDARS FARM, N.F.S. POULTRY & STOCK FARM, Midlothian, Va.

Productive Farms,

Hanover county, between the mountains and Tidewater. Land and seasons conducive to successful farming. FRANK H. COX, Ashland, Va.

1905.]

Why pay for the cost of Importing and cross country charges, &c.,

—FOR A—

Percheron Stallion

when you can get a better one close to home and acclimated, for importers are not philanthropists as a rule, but add these costs to the price which they would ask you for the animal had they not these risks and expenses to contend with? I am a breeder with no big expenses to contend with, and I cannot and will not be under sold on the same class of stock. Come to see my stock,

PERCHERON HORSES, SHORT HORN CATTLE and BERKSHIRE HOGS, and no cheap scrubs on the farm. I will treat you right, my living and reputation would demand it, if I had no higher motive.

JOHN F. LEWIS,

Lynnwood Stock Farm,
Lynnwood, Va.

Stock For Sale.

¾ and 15-16 GRADE ANGUS Bull and Heifer Calves.

1 BULL CALF out of Shorthorn Cow, by Angus Bull.

1 splendid 6 year old BAY MARE, weight 1,200 pounds, quick, active and a good driver. Price, \$150.

1 pair of Blooky, WELL BUILT MULES, 5 years old, well broken. Price, \$300.

Pure Bred POLAND CHINA PIGS, \$5 each. WHITE PLYMOUTH ROCK and SILVER LACED WYANDOTTE eggs.

W. M. WATKINS & SONS, Saxe, Va.

ELLERSLIE FARM

Thoroughbred Horses AND SHORTHORN CATTLE, Pure Southdown Sheep and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON, CHARLOTTESVILLE, VA

DORSET SHEEP.

Very choice young rams at reasonable prices.

ALFALFA SEED, strictly fancy, Western grown. Selected from the best that has come on market this season.

BEARDESS BARKLEY, the best known pure for alfalfa seed. Guaranteed pure. J. E. WING & BROS., Mechanicsburg, O.

Special Prices for February on

Aberdeen-Angus and Shorthorn cattle, Poland China and Berkshire hogs, Fox bound, Fox terrier and Scotch Collie dogs, Plymouth Rocks and Leghorn chickens. J. D. STODGHILL, Shelbyville, Ky.

the Fire" will please younger readers of the magazine.

A highly diverting American mystery story is "A Transaction in Rubies," the leading novelette in the February number of Lippincott's Magazine. Frederic Reddall, the author, seems to have responded to a demand for strong, thrilling detective stories such as this loss of jewels at a house party on Long Island, which cast suspicion upon all the guests and made them afraid to leave until the matter should be cleared up. The discovery of the thief by means of the impression of his thumb is ingeniously dealt with.

Marion Harland contributes a charming Southern romance entitled "A War Time Evangeline," which in substance and style presents this well known writer at her best. "The Siege," by Will Levington Comfort, is a tale of Manchuria. An American promoter's lovely daughter is the pivot around which stirring scenes revolve and carry conviction to the mind of the reader. "The Real Margaret," by Ina Brevoort Roberts, shows the astute New York reporter, whose quick wit pierces the disguise of an heiress who has been marked out for matrimony by a titled foreigner. Vincent Harper's story, called "The Other One," is distinctly humorous. In this the man who missed the boat fared better than the one who caught it. The author of "Susan Clegg and Her Friend, Mrs. Lathrop," Anne Warner, displays her deft touch in dealing with human nature in the story she whimsically calls "And Maude."

AN OFFERING TO HELP.

If you are trying to decide what incubator is best for you to buy, you should have an 80-page book telling about incubators, issued by the George Ertel Company, Quincy, Ill. It tells what an incubator has to do. There are chapters describing just how an old hen hatches out her downy brood and just what a machine will have to do that is intended to accomplish the same result.

The story of the Development of the Chick in the Egg, will give you a better idea of what is required of an incubator than dozens of ordinary catalogues. It is something you ought to have, even if you are still going to stick to old-fashioned methods, because it will help even in fixing a nest for the setting hen.

The book is free. You need only write a postal, and the firm will gladly mail it to you.

Insurance Agent—Come, Pat; let me insure your life for a thousand dollars. Pat—Wait a bit, thin. Oi think Oi'll take out a hundred-dollar policy first, an' if Oi die an' get that wan then Oi'll take out a bigger wan.

Mention THE SOUTHERN PLANTER in writing.

RED POLLS.

We offer the following bulls:

FLOTILLA 6225. Superb Sire, 6 years old, docile, bred by V. T. Hills of Ohio. Price, \$50.00.

WHISTLER 13478. Calved October 30, 1904.

FLORIZEL 13479. Calved November 5, 1904.

CADET 13480. Calved November 15, 1904.

The last three are nice calves, all by Flotilla out of good cows, \$300 apiece is the price. And a certificate of registration goes with each.

PIERSON BROS.,

Summit, Spotsylvania Co., Va.

:: SOME VERY FINE ::

RED POLLED

Calves, entitled to registry, for sale; also a few very good

Poland China Pigs

whose breeding cannot be excelled. Only one SHETLAND PONY for sale now. ARROWHEAD STOCK FARM, SAM'L B. WOODS, Propr., Charlottesville, Va.

Rose Dale Herd

Aberdeen Angus.

Top notch young registered Bulls our specialty. A few heifers to offer with bull not skin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS, Jeffersonston, Va.

MONTEBELLO HERD

ABERDEEN-ANGUS CATTLE.

FOR SALE.—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va.

DEVON HERD. HAMPSHIRE DOWN FLOCK, ESTABLISHED 1884. ESTABLISHED 1880.

DEVON CATTLE BULLS and HEIFERS.

Hampshire Down Sheep, RAMS and EWES.

ROBERT J. FARRER, Orange, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

REGISTERED CATTLE.**Short Horns.
Polled Durhams.
Red Polls.**

Who wants a few good Bulls, Heifers or Cows? Choice herd, bred and reared in the mountains of Western Texas, below the fever line. Healthy, hardy stock. Write us your wants. Or will sell entire herd of three hundred head, and rent fine ranch reasonably. Splendid opportunity.

LANDA CATTLE COMPANY.
New Braunfels, Texas.
Breeders of Registered Cattle Only.

PLEASANT VALLEY STOCK FARM**Shoorthorn**

calves from fine milking stock.

Yorkshire Pigs

of prolific breed.

JAMES M. HOGE, Hamilton, Va.

REGISTERED**Short-Horn Cattle**

AND POLAND CHINA PIGS
FOR SALE at low prices.
Call and see my stock or
write me. A. J. S. DIEHL,
Port Republic, Va.

REGISTERED**SHORT HORN BULL,**

"PLAIN DEALING," for sale to avoid inbreeding. Bred by Cottrill Bros., Hoosick Falls, N. Y., and is of well established milking strain. Solid deep and of fine form and finish. Weight, 1550 pounds. Price, \$75.
JOS. WILMER, Rapidan, Va.

Springwood Short-Horns

Young stock for sale, sired by Royal Chief No. 185422; he by Imported Royal Stamp Champion Bull at Ohio State Fair this year. Spring and fall Poland China Pigs and shoats; sired by Coler's Perfection. I will sell this hog at a bargain. Call on or write **WM. T. THRASHER, Springwood, Va.**

REGISTERED**SHORTHORNS.**

Having concluded to close out my herd, I offer for sale, 6 LARGE COWS and CALVES from Imp. Josephine Marquis of Bute, 116463; also a nice lot of heifers. **CHAS. VEIRS, Rockville, Md.**

HERFORDS,

(ENTIRE HERD)

DORSETS,

(ENTIRE FLOCK)

A prompt buyer will get a bargain.
H. ARMSTRONG, Lantz Mills, Va.

THE SMALL FARM WELL TILLED.

Some current events have recalled attention to the value of small holdings of real estate for farm purposes.

The wonderful success of the Japanese army has drawn public notice to the fact that the people of that country live on very small patches of land, their limited fertile area supporting a dense population, yet manifestly building up high-class men both as to physical strength and mental endowments.

Discussion of the irrigation problem in our country has simultaneously pointed a way to the profitable occupation of land, especially of that which has been artificially irrigated, in smaller holdings than has heretofore been deemed practicable.

The Sentry believes that public opinion will rapidly concentrate in favor of small farms, and thorough cultivation, so as to sustain any measure calculated to bring about those desirable objects.

Modern intensive farming has shown its benefits in many American communities, confirming the lessons that are seemingly taught by what we learn in regard to the Japanese. Irrigation has been shown to afford positive protection against loss of crops, thus leading to an easier solution of the problem, how to get the people back to the soil.

One great mistake made by farmers is that they do not study their profession as do lawyers, doctors, or merchants. Daniel Webster said that it required greater talent, and better judgment to be a good farmer than to be a great statesman. No occupation is subject to a greater variety of modifying influences, and few, if any, demand a wider range of knowledge than that of agriculture.

But when it is prosecuted on a small scale, with only a few products and with simple methods, the requirements as to knowledge and skill, especially in the beginning, are less exacting.

Nor is it now necessary for men to search the outskirts of civilization to find land where they may secure a living. Small tracts of from one to five acres, may be had on easy terms almost anywhere, even in the suburbs of large cities. Thus the isolation of farm life is avoided, and when there are 40 to 50 families instead of one on 100 acres, co-operation makes building, as well as the procurement of tools, animals and machinery much easier.

It is also much easier to combine work on the land with employment in the shop or store, to the great advantage of the worker. One advocate of the small holding recently said that if a man who now works eight hours a day at the forge or the smelter or the lathe would work four hours a day there and four hours on his own acre of irrigated or fertile land, he would double his income, and thus ensure his

Elkton Stock Farm,

LOCATED ON NORFOLK & WESTERN R. R.
12 Miles W. of Lynchburg.
Breeders of Pure Bred, Registered

HEREFORD CATTLE

AND

BERKSHIRE HOGS.

Young stock for sale at all times, at reasonable prices.

All statements and representations guaranteed.

LONG DISTANCE TELEPHONE.

FOREST DEPOT, VIRGINIA.**Swift Creek Stock and Dairy Farm**

Has for sale a large number of nice young registered A. J. C. C.

**JERSEY BULLS
AND HEIFERS.**

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$35; Heifers, same age, \$30. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

REG. JERSEY COW,

"Lady Olie," FOR SALE. 6 years old and fresh to fall, \$50. JERSEY BULL, 8 mos. old, \$20. M. B. TURKEYS, bred from first prize winner (50 lb.), Madison Square and N. Y. State Shows. Toms, \$4; hens, \$3. White Wyandotte Cockerels, 75c. each. **J. D. JENNINGS, Pamplin, Va.**

\$10.00 EACH.

HOLSTEIN BULL CALVES, from excellent milking strains. **E. C. BELLWOOD, St. F. D., No. 1., Manchester, Va.**

**EVERGREEN DAIRY AND STOCK FARM
OFFERS FOR SALE****Registered Jersey Bull,**

Two and one-half years old son of RIOTOS PRIMA DONNA, who tested 17 1/2 pounds of butter in 7 days. Berkshire pigs at farmers' prices. **W. B. GATES, Rice Depot, Va.**

THOROUGH-BRED....**Berkshire Boars,
Dorset Buck Lambs,
Jersey Bull Calves.**

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

... BUY A ...

Cheshire Sow,

from Dr. Wm. C. Johnson, Frederick, Md., and breed her to your good BERKSHIRE BOAR and see what fine meat you will raise.

BERKSHIRE I offer some exceedingly choice young boars for sale; by Imported Danesfield Tailor, 76910 and out of Biltmore bred sows. It will be hard to find better or cheaper stock.

HENRY WARDEN, Fredericksburg, Va.

BERKSHIRES

My advertisement in the Southern Planter has resulted in clearing out every Berkshire I have for sale. Thanking all patrons, I respectfully call attention to the March Southern Planter, respecting spring pigs. ROBERT HIBBERT, Charlottesville, Va.

PURE-BRED

Berkshire Pigs,

Two months old, \$4 each; \$7 per pair; out of pure bred sows and by registered boars. H. SWINEFORD, 1110 E. Main St., Richmond, Va.



OUR herd represents the very best strains imported

—LARGE—

English Berkshires.

Choose stock at reasonable prices. Address

Cottage Grove Farm,
P. O. Box 5, Greensboro, N. C.

GLENBURN ... FARM ... BERKSHIRES

We have two imported boars and eight imported sows, the cream of the greatest English herds; also animals combining the choicest English blood with that of American champions. Pigs from imported and from English-American animals for sale. DR. J. D. KIRK, Roanoke, Va.

MAPLE GROVE

BERKSHIRES.

Am offering pure bred pigs at reasonable prices. Either sex. Pedigree furnished with each pig.

J. W. McFADDIN,
R. F. D. No. 1, Raphine, Va.

Berkshire Pigs.

Eligible to registry \$6.00 each, \$10.00 pair. S. C. BROWN LEHORN and B. P. ROCK Cockerels \$1.50 to \$2.00. Eggs per setting \$1.00. Also a few BLACK MINORCA and M. B. TURKEYS. None but best handled.

W. A. WILLEROY, Sweet Hall, Va.

HAWKSLEY STO. K FARM

Has some very fine young

BERKSHIRE PIGS.

3 to 4 mos. old. Only "tops" sold. Also a few S. C. B. TURKEY GOBBLES as can be found anywhere.

J. T. OLIVER, Prop., Allen's Level, Va.

family against want when the daily wage should cease.

There has long been a tendency among economists to advise the working classes to "get back to the soil" as rapidly as possible, neutralizing the concentration in cities, which has been such an alarming development of the last three or four decades. When that admonition was supposed to mean that every worker must, by some means, secure control over 80 or 160 acres of land, the difficulties seemed insurmountable. But if it can be shown to the people thus counseled that they may be comfortably supported and may even accumulate property on a tract of 3, 5 or 10 acres, the problem will seem much easier of solution.

Great Britain is one of the very best cultivated countries in the World. The British farms are much smaller than those in America, but not even yet so small as in exceptional cases have been shown in this country to be profitable. When the time shall arrive that 84 per cent. of the land in the United States, as in Great Britain, shall be usefully employed, with farms subdivided to the minimum limit of practicable tillage, the density of the population and the prosperity of the people will probably have reached high water mark, unless other conditions shall have radically changed.

There is no other calling for the pursuit of which so many helps are freely offered as for that of the tiller of the soil in this country, whether he be a gardener or a farmer. The irrigation project is rapidly transforming at government expense wide areas of desert lands into fields of matchless fertility—the farmer being only required to pay back in installments the original cost, in order that the process may be repeated in other regions.

Then the State and the National Government offer the farmer much instruction gratis in the preparation of soils, the cultivation of crops, the rearing of animals, &c., and the skilled farmer is of all classes, the most willing to impart what he knows of his occupation to his neighbors.

How greatly the country at large would be benefited by the subdivision of land holdings and a more perfect cultivation of the soil will readily appear to any thinking mind. A thousand or a million men each occupying and cultivating 2 to 5 acres of ground would be worth infinitely more to any commonwealth than the same number herded together in cities. The taxable value of real estate would be enormously increased thus lightening the burdens of taxation to the average citizen. All history shows that nothing promotes the sturdy qualities of patriotism and right living like the ownership of land. This is equally true whether the tract owned is only an acre or whether it is a broad estate. The latter, however, tend to aristocracy, while the small tract preserves self-respect and equality.—*The Sentry.*

PURE-BRED

Poland-China Pigs

FOR SALE.

Farrowed in November 1904. Price, five dollars each, if taken at any time in February. Send check or cash with order. Apply to C. A. WILLIAMS, Ringwood, Halifax County, N. C.



Registered P. Chinas
Berkshire
C. Whites. Large
strain. All ages
mated not skin, 8
week pigs. Bred
sows, Service boars,
Guernsey calves,
Scotch Collie pups,
and Poultry. Write for prices and free circular.

P. F. HAMILTON,
Cochranville, Chester Co., Pa.

ORCHARD HILL PURE-BRED

POLAND-CHINAS.

1 beautiful sow 9 months old; some nice pigs later. A fine GUERNSEY BULL CALF, whose grand dam tested 348 pounds butter in 1 year. Also S. C. B. Leghorn and W. Wyandotte eggs at \$1 per 15. F. M. SMITH, JR., R. F. D., 4, Charlottesville, Va.

SALT POND HERD

Duroc Jerseys

PAUL J., 21625, heads the herd, with such sows as LULIE'S PET, 40434, BELLE OF SALT POND, 70454, and LADY OF VIRGINIA, 70456. Young stock for sale. S. A. WHITTAKER, Hopedale, Va.

Chester White Hogs,

Best hog on earth at farmer's prices. Imp. PERCHERON STALLION, weight, 1900 lbs. S. M. WISECARVER, Rustburg, Va.



JACKS, JENNETS, STALLIONS.

Fine Jacks a specialty.

Write for what you want.
W. E. KNIGHT & CO., R. F. D. 5,
Nashville, Tenn. Phone 3095L

KNIGHT & JETTON,

Breeders of and dealers in

JACKS, JENNETS, STALLIONS,
Durham and Hereford

Yearlings.

FINE JACKS a specialty.

Send stamp for catalog.

Murfreesboro, Tenn.



KENTUCKY JACK FARM



I have now the finest and best lot of big, black, Spanish and Kentucky-bred Jacks that I ever had. In my 18 years' breeding experience, to offer to the trade. Write or come to see me. You will find me at once right. JOE E. WRIGHT, Junction City, Ky.

For Sale or Exchange.

MALTESE JACK, five years, sound, kind and sure. One pure Red Poll bull calf. W. B. MOTT, Dixondale, Va.

THE POETRY OF THE SOUTH.

Mary Washington, Lynchburg, Va.

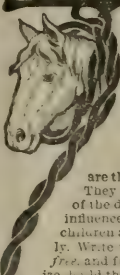
Some time ago, Mr. Hamilton W. Mable published in the "The International Monthly," an article on Southern poetry, giving, on the whole, a very just estimate and analysis of it. Mr. Mable claims that with the exception of Poe, Southern poets have not yet received adequate attention at the hands of students and critics of American literature. "The student of vital conditions in this country" says he, "might have predicted that the deepest and richest poetic movement would take place in the South rather than in the North. History has failed to confirm such a prediction, but it remains true that in lyrical quality, in sensitiveness, in simplicity and directness of emotional response to the appeal of beauty in nature, on that capacity for pure song which more than any thing else, reveals the poetic temperament, the southern poets are at one from the time of Poe to that of Lanier. The product is not great in mass. It is not so interpretative to the spiritual history of a great community as is the work of the northern poets, but as far as it goes, it is pure poetry, poetry for the love of beauty rather than for the sake of ideas. It is transparently sincere. Its spontaneity gives it fidelity to experience and emotion. It is the poetry of feeling rather than of the intellect."

Mr. Mable cites Henry Timrod, Mr. H. Hayne, Wm. Gilmore Simms and Sydney Lanier as poets whose works have never received the attention they deserved. "The Southern Poets" he asserts, "share a richness of temperament, a freedom and courage of emotion denied to the majority of New England singers. They are natural singers, with a quick ear for melody of the kind which instantly discloses its charm. They are mellifluous. They are one and all, lovers of nature, but with the exception of Lanier, they approach her through the feelings and sentiments, and are certain to describe her rich and tropical aspects."

The two earliest southern poets, of whom I have any knowledge, are Francis Scott Key, of Maryland, and Washington Allston, of South Carolina, both born in the year, 1779. The former was born in Frederick county, Md., August, 1779. He was educated at St. John's College, studied law at Annapolis, and commenced the practice of it at Frederick, in 1804. In a few years, he removed to Washington City, where he was made District Attorney. Being detained by the British fleet, during the bombardment of Fort Mifflin, September 13, 1814, he gave vent to his feelings in the verses which have since become our national lyric, "The Star Spangled Banner." They were written out on his return to Baltimore, and at once seized upon the public fancy.

The air of "The Star Spangled Banner," is played every afternoon at West

LOST, STRAYED OR STOLEN



The telephone gets the news of your loss all over the country long before you could get to town and get postal cards sent out. You can arouse your neighbors in time to help "catch the thief," besides it's handy on the farm every day, especially in emergencies—when you are in trouble and need help quick.

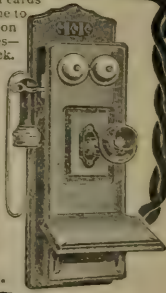
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TELEPHONES

are the cheapest telephones because they are the best. They pay for themselves in a short time, remove many of the disadvantages of farm life, and extend the farmer's influence. Make home more pleasant for the wife and children and open up new opportunities for the whole family. Write for book F 113 "Telephone Facts for Farmers." It's free, and full of just what you want to know—how to organize, build the line, etc. Send for book. Address nearest office.

Stromberg-Carlson Telephone Mfg. Co.

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Chicago, Ill.



EWELL FARM, Spring Hill, Maury Co., Tennessee.

TROTTERS and PACERS.

JOHN R. GENTRY 2.00%.

Successful Race Horse, Show Horse, Road Horse, Sire. Sold at auction for a higher price than any other pacer ever brought at auction. Popular everywhere known. His get show qualities that will place him in the front rank as a sire of trotters as well as pacers.

McEwen 2.18%.

A golden chestnut, 16 hands high, weighing 1,200 pounds. A world's champion as a four-year-old. Always a winner in show rings. Second at St. Louis, 1904. Sire of 23 in list.

HAL BROWN 0796.

Selected as best representative to succeed Brown Hal, 2.12%, at Ewell Farm. Brother to Hal Braden, 2.07%; Braden, 2.10%; Brown Braden, 2.13%; Brandon, 2.12%. Could show 2 minute gait as yearling. Southern Breeders should breed the best only. Only the best kept at Ewell Farm. Address

GEO. CAMPBELL BROWN, Spring Hill, Tennessee.

Scotch Collies

Edgewood Stock Farm.

When you buy a Collie, why not get the right blood? What is the matter with Christopher, Ormskirk Emerald, Ormskirk Amazement, Sefton Hero?

We have a litter of sables of this blood. They have full white masks.

Both parents trained drivers. The kind that love stock driving more than eating their dinners. Order quick if you want one. H. B. ARBUCKLE, Maxwellton, W. Va.

A CHOICE LOT OF

COLLIE PUPS.

Sable and White and Black and White. Just to advertise my poultry, I offer some S. C. W. LEGHORN, Cockerels at 50c. each. B. P. Cock, Cockerels, Harkins, Bradley, and Matchless V. S. strains at a bargain. One ready for service BERKSHIRE BOAR.

ALFRED P. WHITE, JR., Parkside, Va.

Scotch Collie Pups

FOR SALE,

Two months old. Fine stock. Color, sable. \$5 for male, \$4 for female, if taken now. C. V. HULTMAN Sweet Hall, Va.

Scotch Collies

Champion blood of England and America. Puppies now ready to ship. Also bitches in whelp for sale. MEYER & JEHNE, Farmville, Va.

COLLIE PUPS

By Imported Sires—sable and white and tri-colors. Prices \$8 to \$15. Older ones correspondingly low. Book on Training, 50 cents. Free if you buy a Collie.

MAPLEMONT STOCK FARM, Rutland, Vermont.

A PAIR OF

BEAGLE HOUNDS

1 year old for sale. Guarantee them perfect. Price, \$10; also MAMMOTH BRONZE TOMS, Penny bred Junbos, \$4.

ROBERT B. TAYLOR, Cedon, Va.

When corresponding with our advertisers always mention the
Southern Planter.

Point, at the conclusion of dress parade, and it is very impressive to see the spectators arising from their seats and the men uncovering their heads, whilst the landscape with its chain of mountains and noble river, gives an additional charm to the scene, and the rows of stalwart, fine young soldiers, look as if they were ready and able to maintain the honor of "The Star Spangled Banner."

Key was the author of some other songs, as well as hymns and poems, which were collected and published in 1857, but he will be known to posterity solely as the author of "The Star Spangled Banner." He died in Baltimore, January 11, 1843.

Washington Allston, the contemporary of Francis Scott Key, was born November 5th, 1773 at Waccamaw, S. C., where his father was a wealthy planter. He became illustrious as a painter, winning for himself the title of "the American Titian." He went to London in 1801 to prosecute his art studies in the Royal Academy, under Benjamin West, with whom he contracted a life-long friendship. In 1804, he repaired to Paris and then to Rome where he spent nearly four years, studying the art and scenery of Italy. During this period, he became intimate with Thorwaldsen and with Coleridge, and the latter declared that he was not surpassed by any man in that age either in artistic or poetic genius. So prodigal was nature in her gifts to Allston that he had sufficient literary talent to have enabled him to shine as an author, had not this been overshadowed by his still greater talent for art.

His literary works are "The Sylphs of the Season and other poems" (1813), "Monaldi" (1841), a tragical romance, and "Lectures on Art," edited by his brother-in-law, R. H. Dana, novelist, 1850.

Next on our list of old-time Southern poets, comes Richard Henry Wilde, of Georgia, born September 24th, 1789; died September 10, 1847. His fame rests on his beautiful poem on "The Brevity of Life," of which we subjoin the two opening stanzas:

"My life is like the summer rose
That opens to the morning sky,
But ere the shades of evening close,
Is scattered on the ground to die.
Yet on the roses' humble bed
The sweetest dews of night are shed,
As if she wept the waste to see,
But none shall weep a tear for me!"

"My life is like the autumn leaf,
That trembles in the moon's pale ray,
Its hold is frail, its date is brief,
Restless, and soon to pass away.
Yet ere that leaf shall fall and fade,
The parent tree will mourn its shade,
The wind bewail the leafless tree,
But none shall breathe a sigh for me!"

In one of the parks of Augusta, Ga., stands a shaft erected to Wilde's mem-



FOR MAN OR BEAST **PENETRATES WONDERFULLY. ALL DEALERS**

SCIENTIFICALLY PREPARED

FOR HOME FACTORY OR FARM

SLOAN'S LINIMENT

THIS TIME TESTED FAMILY REMEDY

Kills Germs **HAS NO EQUAL**

KILLS PAIN

The Grove Stock Farm

Offers for prompt shipment 6 pure bred
HOLSTEIN-FRESIAN BULL
Calves from 4 to 6 months old.

**ORDERS BOOKED FOR APRIL AND MAY DELIVERY OF
BERKSHIRE PIGS.**

PLYMOUTH ROCK COCKERELS--a nice lot.

N. & W and Southern Railways.

T. O. SANDY, Burkeville, Va.

ANGORA GOATS

We can supply a few does with all orders for bucks at rock bottom prices. We are not speculators or agents. We raise all the Angoras we sell. Satisfaction guaranteed.

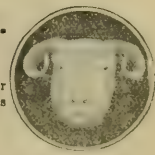
DIAMOND V RANCH, - - - Rock Castle, Va.

EDGEWOOD STOCK FARM.

DORSETS.

Our **FALL LAMBS** are here, friends, and they are crackjacks. Our Imported Ewes started lambing October 15th. Better give us your orders now. Last year many of you were too late.

J. D. and H. B. ARBUCKLE, Maxwellton, Greenbrier, Co., W. Va.



When corresponding with our advertisers always mention the
Southern Planter.

ory. His name and the date of his birth and death are inscribed on one side. On another we read—"Poet, Orator, Jurist, Historian, Statesman"—On the third side is inscribed, "erected by the Hayne Literary Club of Augusta, 1896" whilst on the fourth side is a sculptured rose, and the first stanza of his famous poem.

Amongst our old poets, we should mention William Gilmore Simms, of South Carolina, a very prolific writer, both in poetry and prose. He was born in Charleston, S. C., April 17 1806. He wrote in all eighteen volumes of poetry, besides two dramas and an immense number of novels. The following is a list, tho' not a complete one, of his poetical works.

"Lyrical and Other Poems," 1827; "Vision of Cortez, Cain and other Poems," 1829; "Tri-Color, or Three Days of Blood in Paris," 1830; "Atalantis, a Tale of the Sea," 1832; "Donna Florida," 1843; "Arcadytes, or Songs of the South," 1846; "Lays of the Palmetto, Lyrics and Ballads," commemorating exploits of the Palmetto Regiment in the Mexican War, 1848; "The Eye and the Wing," a collection of poems, 1848; "Poems Chiefly Imaginative," "Miscellaneous Poems," "The Casique of Acabee," "The City of the Silent," a poem delivered at the consecration of Magnolia Cemetery, Charleston, 1850, "War Lyrics of the South," a collection of lyrics by Southern authors," 1866.

Simms reminds us of a very gifted South Carolina poet, who lived at about the same time, Edward Coote Pinkney, of whom Edgar Poe says: "It was the misfortune of Mr. Pinkney to have been born too far South. Had he been a New Englander, it is probable he would have been ranked as the first of American lyricists."

Mr. Pinkney's fame rests chiefly on his exquisite poem, entitled "A Health," which opens thus:

"I fill this cup to one made up
Of loveliness alone—
A woman of her gentle sex
The seeming paragon—
To whom the better elements
And kindly stars have given
A form so fair that like the air,
'Tis less of earth than heaven."

The closing lines are especially fine:
"Her health! And would on earth
there stood,

Some form of such a frame;
That life might be all poetry,
And weariness a name."

THE AVERY "CORN QUEEN."

The Avery Manufacturing Company, Peoria, Ill., are advertising their "Corn Queen" Planter in this issue for the first time. As this planter has some valuable, exclusive features, and is so well recommended, we suggest that our readers investigate its merits at once. This company has an Eastern agency in Baltimore. Look up the ad.



ACTOR 26TH, 1895SS.

way daily. Address S. W. ANDERSON, Blaker Mills, Greenbrier Co., W. Va. Telephone and Telegraph Station, Alderson, W. Va.

'NGLESIDE HEREFORDS

Nearly 500 head registered cattle in herd. Herd headed by the noted sire, ACTOR 26TH, 1895SS, assisted by Actor 26th, 1895SS, Marmaduke 26th, 1895SS, and Mapleton, 1895SS, all of which won prizes at the St. Louis World Fair, including the Junior Championship. Besides many other prizes at a number of Western and Western Fairs, including the International at Chicago.

They grow large, mature early, and the greatest grazers of any of the beef breeds, and for the economy of production of high class beef have no equal. A choice lot of bulls, cows and heifers for sale. Also in number of Polled Hereford bulls recorded in the National Polled Hereford records. Write for catalogue and prices, or, what is better, come and see the herd. Farm near Alderson, W. Va., on C. & O. R. R. Four trains each

Bacon Hall Farm.
Hereford Cattle :- Berkshire Hogs
REGISTERED—ALL AGES.
DORSET RAMS.
Toulouse Geese, Muscovy Ducks.
MOTTO: Satisfaction or no sale.
E. M. GILLET & SON, - Glencoe, Maryland.

Rosemont Farm.

Our offering this month is small, but very choice consisting of 2 BULL CALVES by Acroba, out of fashionably bred dams. Inquire for particulars etc. Every stockman and farmer should read

"A Brief History of Hereford Cattle"

which we will send free.

POSEMONT FARM, Berryville, Clarke Co., Va.



FOR SALE Ten registered Jersey heifer calves, from 3 to 6 months old, \$25.00 per head.

Jersey and Guernsey bulls, 6 months old, \$30.00 each. Two yearling Biltmore bred Berkshire boars \$30.00 each. Also young sows bred and pigs, Bronze Turkeys, Barred Plymouth Rock and Single Comb Brown Leghorn fowls and Pekin Ducks.

M. B. ROWE & CO.,

FREDERICKSBURG, VA.

ORGANIZED 1832.

ASSETS, \$932,050.00.

Virginia Fire and Marine Insurance Company, of Richmond, Va.
Insures Against Fire and Lightning.

All descriptions of property in country and town, private or public, insured at fair rates, on accommodating terms.

AGENCIES IN EVERY TOWN AND COUNTY.

W. H. PALMER, President.

W. H. McCARTHY, Secretary.

EWELL FARM'S BLUE RIBBONERS.

Ewell Farm breeds the best trotters and pacers as is shown by the fact that they sent a large exhibit over to the World's Fair at St. Louis last summer, and although the fifteen head had received only about one month's preparation on account of the uncertainty of the Live Stock show being held, they came off victorious with fourteen World's Fair ribbons. McEwen won second in his class, and so keen a judge as The Breeder's Gazette thought and stated in their columns that they thought he should have been first. He and his get took seven of the premiums, but the strongest showing was made by the sucklings, the get of the well known and popular John R. Gentry. These little fellows in competition with aged horses won third premium in get of sire ring, and took firsts, seconds, and thirds in their classes. John R. Gentry has record of 2:00½, and was the first horse to approach the two minute mark, and at the same time he still holds the combination of the fastest race records held by any one horse, on both mile and half mile tracks, in races; 2:01½ on a mile track and 2:04¼ on a half mile track. In his racing days he met and defeated all comers. Also as a show horse in Madison Square Garden, he stood first. Judged by the strictest standards of performance and conformation, he is unequalled, in fact, almost perfect. As a sire, he is getting a most remarkable lot of colts with beauty, speed at both gaits and brains. One of his get a two-year-old, sold in 1904 for \$1,600. A weanling by him brought \$1,000 and a gelding by him, \$3,000. All others sold, brought an average of over \$300, and none over one year old. You can't afford not to breed to a horse like John R. Gentry.

POINT OF VIEW.

Senator Penrose says that a friend of his residing in Wilkes-Barre recently engaged as nurse a Scotch girl just come to this country.

It appears that one Sunday the lady induced the nurse, who is the strictest sort of Presbyterian, to attend a beautiful church just erected in Wilkes-Barre.

When the girl returned her mistress asked her if she had not found the church a fine one.

"Yes, Ma'am," responded the girl, "it is very beautiful,"

"And the singing," said the lady, "wasn't that lovely?"

"Oh, yes," replied the nurse, "it was very lovely, Ma'am, but don't you think it's an awful way to spend the Sabbath?"—February Lippincott's.

She—That new boarder who come to-day has a beautiful olive complexion.

He—Well, after she's been here a few weeks, I guess she'll have a prune complexion.

THIRTY DAY TRIAL OFFER

Any reader of this paper who will remit ten cents to me for a can or half can of my remedy at below prices and will give same a fair trial for 30 days, may have his money refunded if at the end of that time he is not satisfied that his hogs have been benefited; that the remedy will do all that is claimed for it, and that it is the best hog remedy he has ever used.

DR. HAAS' HOG REMEDY

prevents and arrests disease, stops cough, expels worms, increases flesh, hastens maturity, and pays for itself many times over in feed saved. Purely medicine.

I INSURE YOUR HOGS AND PAY FOR ALL THAT DIE

when it is fed as a preventive. Full particulars in "HOG LOGY." Nearly 30 years' success and the biggest money-maker for hog raisers known. 25 lb. can, \$12.50; half can (12½ lbs.), \$6.50, prepaid; packages, \$2.50, \$1.25 and 50 cents. None genuine without my signature on package or can label.

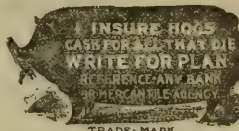
HOG BOOK FREE.

asking for it.

Many new and important subjects have been added and every phase of swine raising, from start to finish, is covered in a thorough and practical manner.

WONDER VERMIN KILLER kills lice, mites and vermin on poultry and live stock; 25 cents per box; by mail, 35 cents.

JOS. HAAS, V. S., Indianapolis, Ind.



TRADE-MARK

FOR SALE

SIX PURE-BRED

BERKSHIRE BOARS,

READY FOR SERVICE.

TEN PURE-BRED

BERKSHIRE SOWS, (Young.)

Also PIGS in PAIRS and TRIOS NO KIN.

FOREST HOME FARM, Purcellville, Va.

My Established Reputation

my premises. Cockerels and Ducks now ready for shipment. Orders booked for eggs.

THOS. S. WHITE, Fessifern Stock and Poultry Farm, Lexington, Va.

THE - OAKS - STOCK - FARM.

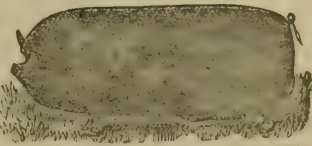
A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

We breed and ship the FINEST STRAINS of

Large ENGLISH BERKSHIRES

for less money than any firm in the South, quality considered. Every pig shipped possesses individual merit. Pedigree furnished with all stock. 200 Gallons Cider Vinegar.

ALEX. HARMAN, Mgr., Lexington, Va.



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The Southern Planter	\$ 50
The Gospel Worker	1 00
One pair German steel scissors, 5 inches	25
Total	\$1 75
All three for only \$1.	

THE GOSPEL WORKER. WEEKLY.

The Gospel Worker is a good, clean, up-to-date Baptist weekly, published at a \$1 a year. It is full of denominational matters of interest. Some of the most eminent Baptist divines in the South are contributors to the Gospel Worker. Its facilities for turning out a first-class, high-grade paper are unsurpassed. The Worker will keep you thoroughly posted on all subjects and phases of denominational work. It is without doubt

VIRGINIA'S GREAT BAPTIST WEEKLY.
Write to 20 Governor street, Richmond, for sample.

ONE PAIR BEST GERMAN STEEL SCISSORS. FIVE INCHES LONG.



These scissors are made of the best German steel, hold edge well, do not break. Full five inches long. Cannot be bought at retail anywhere for less than 25 cents.

This offer will not appear again. If you want to take advantage of it, you must do so at once. Cut out the coupon at bottom of page, fill out, enclose \$1, and mail to us not later than February 10th.

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SEND GOSPEL WORKER TO

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SEND SCISSORS TO

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P. O.

If you wish you can have the Gospel Worker sent to one address. The Southern Planter to another address and the scissors to another address, or you can have them all three sent to one address. It matters not whether you



Highland STOCK FARM.

High class Poultry at reasonable prices.

**Mammoth Bronze
Turkeys, Barred Plymouth Rock
Cockerels, and Muscovy Ducks.**

HENRY S. BOWEN,
Wittens Mill,
Tazewell Co., Va.

Large Yorkshire Pigs, NOW READY FOR SHIPMENT.

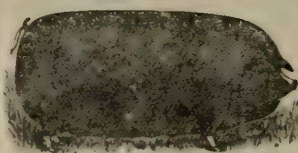
The large Yorkshires are more prolific, and will grow faster, and make more and better bacon than any other breed.

— ALSO —

INDIAN GAMES, the best table fowl.
WHITE WYANDOTTES, the best for all purposes.
WHITE LEGHORNS, the greatest layers.

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BOWMONT FARMS. Salem, Va.

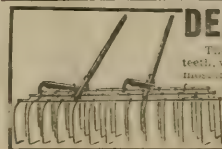


I have a few **CHOICE PIGS, BOARS and BRED SOWS** that I now offer at reduced prices in order to reduce my stock before February and March litters arrive. I don't believe there is a better bred herd of **POLAND CHINAS** in Virginia than mine, and their individuality is so good that I am willing to ship subject to return at my expense if not exactly as represented. Am also booking orders for spring pigs. My prices are lower than ever for this month. Write for prices and testimonials. J. F. DURRETTE, Birdwood, Albemarle county, Va.

POLAND CHINA AND Tamworth Pigs

entitled to registration; also bred sows at reasonable prices.

APPLY TO **J. C. GRAVES, Barboursville, Orange Co., Va.**



DEAD WEEDS—LIVE CROPS

The **YORK IMPROVED WEEDER** has square spring steel teeth, with round points, narrow in the body and of great flexibility—the most essential of a weeder. Do not bash nor bruise the young plants with the teeth. Never clog give greater clearance. The teeth being square, never break. The frame is made of strong, durable, single steel—handles and shafts are adjustable. Send for free circular. The Spangler Corn Planters and Grain Drills are the best.

THE SPANGLER MFG. CO., 608 Queen St., York, Pa.

are now a subscriber to one or both of the papers, your subscription will be moved up one year from date of the expiration of your present subscription.

THE SOUTHERN PLANTER

Is the oldest agricultural journal in the country, and is edited by a thoroughly scientific and practical farmer of 25 years actual experience. Each issue is a complete magazine in itself and contains a department for every branch of farming.

DEHORNING TIME.

There is no longer any question about the advisability and the benefits of dehorning cattle. But at this time of year, when stock is shut up most of the time, they are more liable to injure themselves and others, when turned out for air and exercise, than when they are running out all of the time. To prevent this damage and often loss, dehorning is made absolutely necessary.

Fat stock and dairy cows thrive and do better when they are hornless. Few farmers are prepared to dehorn their own cattle. Any farmer can, however, dehorn his entire herd at little or no expense and save the usual fee of 50 cents to \$1 per head. By the use of the Keystone Dehorner, this operation will not be laborious, and will cause but an instant's pain. The "Keystone" cuts on four sides at once—clean, clear, shear cut—never bruises nor crushes, and the process is practically painless to the animal. This dehorner is made by M. T. Phillips, of Pomeroy, Pa., who will be pleased to send descriptive circulars and prices to all interested parties.

HE WENT BACK.

General Serman was one of eleven children. When he was a small boy his father (the celebrated Sherman) said something one day to hurt "Cumpy's" feelings. He uttered the usual small-boy's threat of running away, and accordingly retreated across to a neighbor's, declaring that he was going to be "Mr. King's little boy." He awaited developments, but instead of the stern parent, melted with tears of distress, to beseech him to return, a trunk of clothes arrived addressed to "Cumpy King," and a message from the Judge that he had enough children without him, and hoped that Mr. King would like his new son.

There was nothing for it but to go home ignominiously, which Cumpy, for once out-generalled, did forthwith. But his father called him "Cumpy King" for several days, until the lesson was well learned.—February Lippincott's.

Mr. Sipp—Young man, how dare you swear before my wife?"

Boy—How did I know your wife wanted to swear first?

STUDEBAKER



It Covers 101 Acres

Think of it! A hundred and one acres—bigger than the average farm. That's the Studebaker—the largest vehicle factory in the world. It means something to you, for the Studebaker wouldn't have grown from a humble little country blacksmith shop to the largest plant of the kind in the world, increasing in size and growing in popularity and reputation, if it hadn't deserved to grow. The truth is people buy more Studebakers because they have found that the Studebaker gives better satisfaction.

If you could go through the factory and see just how the Studebaker is made; see 65 acres piled high with air-dried lumber—the pick of the world's markets—see the laboratories where experts test all materials used—see the scores of inspectors whose duty it is to see that every part is perfect before it is used—see the acres and acres of the most improved modern machinery—see the care and thoroughness taken from start to finish—you'd understand why the Studebaker is the most popular vehicle in the world.

If you're thinking of buying a farm wagon, a spring wagon, a surrey, a buggy, a family carriage, a set of harness or a vehicle of any kind for business or pleasure, look up the Studebaker agent. He'll be glad to show you—and it costs nothing to look.

Ask him for the new Studebaker almanac. If he can't supply you, send your name and address to us with a two cent stamp and a free copy will be sent you. Ask for Booklet No. 50.

STUDEBAKER BROS. MFG. CO.,
SOUTH BEND, INDIANA.

Selling Agents Most Everywhere. A dealer may make more by selling you some other, but you make most by buying a Studebaker.

OAK HILL FARM

SADDLE and THOROUGHbred HORSES,
ABERDEEN-ANGUS and JERSEY CAT-
TLE, BERKSHIRE, POLAND-CHINA, DROC
JERSEY and TAMWORTH HOGS. :- :-

WHITE PLYMOUTH ROCKS, WHITE HOLLAND TURKEYS, PEKIN
DUCKS and PEA FOWLS. Eggs in Season.

SATISFACTION GUARANTEED. WRITE FOR PRICES.

Shipping Point, Oak Hill, (station on farm) D. & W. Railway 15 miles West of Danville, Va.

SAM'L HAIRSTON, Wenona, Va.



Syracuse Chilled Light Draft Plow
General Purpose

Both right and left hand. An easily handled plow and just the thing for light soils. Full chilled moldboard, sloping chilled landside, chilled share with shin piece combined. Index beam quickly set to take more or less land. If no Syracuse dealer in your town, write us direct. We'll send catalogue and particulars and see that you are supplied.

Syracuse Chilled Plow Co.,
SYRACUSE, N. Y.

THE OLD-TIME FARMER AND HIS MODERN PROTOTYPE.

Let us cast a parting glance at the typical old-time farmer. Two or three months in each year, there being practically nothing to do on the farm, he sent his children to the little one-room school house. There the pupils recited mechanically from text-books saturated with city ideas and city ideals—books in which the beauties and wonders of agriculture and nature study found no place. The city allured the most ambitious pupils; the others turned blindly and stolidly to the task whose deeper meaning was never to be revealed to them. Ancient and costly farming methods remained unchanged, for the "Man with the Hoe" was content with the ways of the fathers. Four or five days in each year, this farmer helped to fill up the larger ruts in the roads, but there was no permanent highway improvement. Season after season bad roads kept him from profitable trips to market; times innumerable they kept his isolated family from needed visits to friends and relatives. Once a week, possibly twice, some one went to the little crossroads post-office to get the letters and papers—if perchance there should be any; these trips were not regular or frequent, because each one meant the loss of half a day from work. With such a slow and costly system, that the farmer wrote few letters and took few papers is not surprising. Then, too, if he wished to summon a doctor, speak to a neighbor, or order from his merchant, a slow horseback trip over bad roads was the only available means of communication; the rural telephone was not dreamed of. But the tragedy of this man's life was that he was a drudge, a mechanical "slave to the wheel of labor." He was blind to the beauty of rural life and ignorant of the wonderful natural forces with which he had to deal.

How different the progressive farmer of to-day! Five months in each year his children go to school, and the teaching has given them a new interest in their environment and in their daily work. The old one-room school-house has given way to an attractive modern structure. Instead of an occasional book bought from the itinerant agent or borrowed from a neighbor, the school library puts the choicest of literary treasures at the disposal of the whole family. The old gullied highway is gone and a well-graded road sweeps by the farmer's house. Instead of the weekly paper and the occasional letter brought from the old post-office, the rural mail-carrier brings a city daily each morning, and letters and magazines in refreshing abundance. To confer with a neighbor no longer means a ride of an hour or two; one or two minutes at the telephone suffices. Other advantages have followed. With better attendance and more enthusiastic school methods have come more regular pupils; better roads and increased

SUNNY HOME HERD.

Aberden Angus Cattle

More than fifty females sired by some of the most famous bulls of the breed. Headed by the great Baron Roseby, No. 57666, son of the world famous Gay Blackbird. Advocates of rival breeds will tell you that this breed is doing, but for sixteen years the Angus have been so far ahead that the breed has been in a class by itself at all the leading markets. Their record at the late International Show is simply what we have been led to expect from the breed. Grand champion steer, Grand Champion car load, highest priced single steer, highest and second highest priced car load, and the usual number of dressed carcass prizes. Remember, we are breeders of years' standing, not "kids" in the business. Write A. L. FRENCH, R. F. D., 2, Byrdville, Va. Station Fitzgerald, N. C., on D. & W. R'y.



—The Delaware Herd of—

ROYAL ANGUS CATTLE

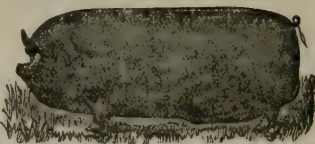
is not surpassed either in breeding or individual animals, by any herd in the East. At the head of our herd is **PRINCE BARBARA, 68604**, the son of the great \$3,100 Prince Ito. Females of equally choice breeding. Write your wants. Remember, we take personal care of our cattle; keep no high priced help; incur no expense of exhibiting; all of which enables us to offer stock at equitable prices. Send for pamphlet.

MYER & SON, Prop., - Bridgeville, Del.

—URY STOCK FARM OF—

HOLSTEIN-FRIESIAN

Have reduced our herd 25 head during the past two months, but would like to sell as many more before going into winter quarters. Herd headed by Dekol 2d, Butter Boy 3d, No. 2, which we can justly claim the best butter backed bull South of the Mason and Dixon line. Also a choice lot of English Berkshire sows from 3 to 9 mos. Sired by Manor Faithful, Fancy Duke and Esau Princess of Filton. Before buying write or come and see us. THOS. FASSITT & SONS, Sylmar, Md.



We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridge Creek Stock Farm, Warrenton, N. C.

Richmond, Fredericksburg & Potomac R. R.

and

Washington Southern Railway

The Double-Track
Link

Connecting the

Atlantic Coast Line Railroad
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Chesapeake & Ohio Railway
Pennsylvania Railroad
Seaboard Air Line Railway
Southern Railway

Between All Points
via Richmond,
Virginia, and
Washington, D. C.



W. P. Taylor, Traffic Manager

The Gateway

between the

North and the South



Fast Mail

Passenger

Express and

Freight Route

Last Call For 1905.

BILTMORE FARMS BERKSHIRE BROOD SOW SALE.

These yearling offerings at unreserved public auction have become more popular each year with a certain class of buyers—i. e., those who want the best only that is to be secured anywhere, and who are willing to go to a little extra trouble and expense to secure such. To satisfy such critical customers we have to risk under the hammer with no reserve price, animals of such exceptional quality that they would generally bring us a larger return as producers in the home herd than they sell for, but we are glad to do it, for these yearly sales have been (in connection with our custom of trying to make every patron's interests our own) one of the chief agents in making our Berkshire business not only the largest in the States or anywhere, but also in making it show each year such a remarkable increase.

WHY IS IT that in the list of names attending each of our sales you see so many that bought at previous ones? It is self-evident that THEY MUST HAVE FOUND THEIR PURCHASES PROFITABLE, AND CANNOT GET THE SAME QUALITY AND LIBERAL GUARANTEES ELSEWHERE.

We have now put in over a year's work with one object in view: TO OFFER IN 1905 A LOT OF BROOD SOWS THAT WILL BE MORE PROFITABLE TO THE BUYERS AND DO US MORE CREDIT AS IMPORTERS AND BREEDERS THAN ANY OTHER LOT THAT HAS EVER GONE UNDER THE HAMMER. WE HAVE THE KIND IN THIS SALE TO DO THIS. This is a strong statement, but we are going to drive a strong lot of young sows into the ring, that for their great development, length, depth and finish can hardly be equalled anywhere, and their breeding is a guarantee that they will go on handing down their good qualities.

If you cannot come, send us a mail bid, which our clerk will handle as directed to your full protection, or if you like, you can have it put in the hands of an outside expert, who will use his own judgment to take advantage of the unexpected bargains that come up in every sale, or you can tell him to "buy the best" within a certain limit, and be certain that you will get it. Better still, come yourself, and you will not regret the trip even if you do not buy. This is so much to the advantage of both parties that we have always found it a good investment to pay the railroad fares of all that buy \$150 or over. It will pay you to meet the other breeders, see our breeding herds, and if you want any Jerseys we have over 350 head in five herds, and as for Standard Poultry, there are the products of over 50 matings of last year's prize winners to select from. A little closer price is always put on all sale stock just at this time as we appreciate a visitor. Write for Catalogue if you have not one.

BILTMORE FARMS,
Berkshire Department. - - BILTMORE, N. C.

travel have developed a new pride in the appearance of grounds and buildings; with better mail facilities there is more thought as to the quality of the periodical literature. And on this man's farm there is no drudgery. Knowledge has ennobled every task, and to him "every common bush is afire with God." His are the advantages of both town and country. Pan still pipes by the riverside, while the ring of the telephone and the distant shriek of the locomotive mingle with the music of his flute.

Do not understand me to say that the new farmer here portrayed is as yet the typical ruralist. He is not, by any means. The old-time farmer is yet many times as numerous. But the future is with the new farmer. The modern leaven will yet leaven the whole lump.—Review of Reviews.

THE FENCE THAT LASTS.

Why do wire fences give way, break and sag? Go out and examine carefully the average wire fence and you will have no trouble in answering this question. In all ready-made woven fences, the stays or uprights are made of smaller wire than the horizontals, consequently they give way sooner and ruin the whole fence.



Another reason that the wire fences sag and break is that proper allowance is not made for the expansion and contraction caused by changing weather. Both of these difficulties are entirely overcome in the Brown Fence.

The uprights are of the same size as the horizontal wires and the laterals are made from high carbon, hard spring coiled wire, which not only allows for all contraction and expansion due to change of temperature, but also relieves the posts of much of the dead pull upon them. Our readers are urged to send for the Brown Fence book. Address Brown Fence & Wire Co., Cleveland, O.

FEARED THE WORST.

Friday Vizer, a familiar negro about town in a certain part of Mississippi, had been found dead, and he being a member of no church or lodge—very unusual for a negro—there was no one to pray for his soul in the great beyond. A few old intimates, however, carried the body to the cemetery in a rude pine coffin, and Bob McRaven, one of the number, an old 'befo'-de-wah ducky,' was called upon for a few remarks. Bob removed his hat and stepped reverently and sadly towards the open grave, and in solemn, funeral tones said:

"Friday Vizer, you is gone. We hopes you is gone whar we specks you ain't!—February Lippincott's.

Early Cotton beats the Boll Weevil

It can readily be proven to your satisfaction, that top dressing the cotton field with one hundred pounds (to the acre) of

Nitrate of Soda

(THE STANDARD FERTILIZER)

increases the cotton yield materially, makes longer and better fibre and brings the crop to maturity rapidly enough to outstrip the ravages of the weevil. Two years ago I announced that forcing rapid growth and quick maturity was the true solution of the weevil evil. Continued experiments have proven the truth of the statement. Try it yourself. I will send to 1,000 cotton planters sufficient Nitrate of Soda,

ABSOLUTELY FREE

to make the test on four one-hundred-foot rows of cotton, if the planter will pay transportation charges and use it as directed. The increase in cotton will more than repay this cost. Preference given to first applicants.

Send Address on Post Card for Bulletins and Conditions.

WILLIAM S. MYERS

12-16 John Street Room 145 New York

Pulls Stumps or Standing Trees.

Clear a two-acre circle with one sitting—pulls anything the wire rope will reach; stumps, trees, grubs, rocks, hedges, etc. A man and a boy with one or two horses can run the

COMBINATION STUMP PULLER,

Stump Anchored or Self Anchoring.

A minute and a half it takes for the ordinary stump. No heavy chains or rods. Note the strong wire rope with patent cupler—grips the rope at any point. Does not choke rope; far ahead of old style "take-ups." Smallest rope we furnish stands 10,000 lbs. strain. It generates immense power and it's made to stand the strain. We also make the Iron Giant Grub and Stump machine, the L. X. L. Grabber and Hawkeye Grub and Stump Machine. Write for free illustrated catalogue. Largest manufacturers of Stump Pullers in the World.

Established 1864.

MILNE MFG. CO.,
834 8th St.,
Monmouth, Ill.

FOR 5 H.P. GAS ENGINES

Grinds Ear Corn and Shuck Corn.

Capacity 12 to 18 bushels per hour. Safety Quick Release. 50 other sizes and styles of

Scientific Grinding Mills.

Sweep-gear, Combined and Power. Most efficient and economical mills on the market. Simple, strong and durable. Write for new catalogue C-5.

THE FOOS MFG. CO., (Established 25 years) Springfield, Ohio.

Highest Award, Gold Medal, St. Louis, 1904.

DeLOACH PATENT

Avoid imitations and infringers and buy the Genuine. Saw Mills, 14 ft. and up. Shingle, Planing, Lath and Cora Mills, four Stroke Hay Presses, Water Wheels. Catalog free. We pay the freight.

DeLOACH MILL MFG. CO., Box 600, Atlanta, Ga.



BEAUTIFUL COLORED PICTURE OF DAN PATCH MAILED FREE

The Colored Lithograph we will send you is a large reproduction of the above engraving, and is made from a photograph taken of Dan while he was going at his highest rate of speed. It is one of the finest motion photographs ever taken and is as natural and life like as if you actually saw Dan coming down the track. It shows Dan flying through the air with every foot off of the ground.

It is printed in Six Brilliant Colors. Size 24 by 34 inches. Free of Advertising.

MAILED FREE IF YOU ANSWER These 2 Questions:

1st.—How Much Stock Of All Kinds Do You Own?

2nd.—Name Paper in Which You Saw This Offer.

Write to.....International Stock Food Co., MINNEAPOLIS, MINN., U. S. A.

AN AGRICULTURAL COLLEGE TEST HIGH RIVER SCHOOL OF AGRICULTURE.

INTERNATIONAL STOCK FOOD CO.

HIGH RIVER, ALTA, CANADA.

DEAR SIR:—I thank you for your letter of the 15th ult., and for all the trouble you have taken to bring "International Stock Food" to my notice. The merits of "International Stock Food" for horses in a poor condition were not unknown to me before your communication came to hand, but I had not given it close attention as a possible medicine for other animals in trouble. A recent trial of the food with a pen of pigs suffering from what I diagnosed as "Erysipelas Pleuro-Enteritis" certainly proved most successful. After losing two hogs within three days out of a pen of seven, I commenced feeding "International Stock Food" liberally to the remainder, all of which had refused to eat the ordinary food and were sick. On the fourth day a third hog died, but the remaining four rapidly recovered and are now well. I took the precaution to feed "International Stock Food" to all pigs on the farm and adjoining pens during this outbreak, and quite believe have saved myself from serious loss by adopting your remedy. I am, Dear Sirs,

O. H. HANSON, Director.

We Have Thousands of Similar Testimonials. We Will Pay You \$1000 If They Are Not the True Experience of Practical Feeders. Beware of Cheap and Inferior Imitations and Substitutes. "International Stock Food" is Fed Every Day to Our World Famous Stallions Dan Patch 1386, D rector 24054, Arlen 24073, Roy Wilkes 24061, and to Our One Hundred Brood Mares and Their Colts.



Largest Stock Food Factory in the World.

Covers Over a City Block. Contains 18 Acres of Floor Space. Also Large Factory at Toronto, Can., Containing 50,000 Feet of Space. Capital Paid in \$2,000,000.00.

DAN PATCH 1:56, CHAMPION HARNESS HORSE OF THE WORLD. VALUED AT \$150,000.

THE PRICE OF COTTON.

The Virginia-Carolina Chemical Co. has issued a notice to all the agents handling their fertilizers that in consequence of the fall in the price of cotton they are prepared to extend the notes of all buyers of cotton fertilizers who desire to carry their cotton until another year. This they are prepared to do on the debtor depositing sufficient cotton to cover the note in any reliable warehouse and handing the receipt to the agent. The note will then be extended six months, from January 1st, at 6 per cent. interest, and the company will pay the insurance on the cotton.

THEIR ESTIMATE.

It was in the superb new Congressional Library in Washington, and one of the ever-present brides making a tour of the city had gone all over the building arm-in-arm with her rather young bridegroom. Taking a last look at the beautiful interior, the bride said at the door,—

"It don't 'mount to so turrible much after all, now do it?" to which the young Benedict replied with,—

"Nop; 'tain't no great shakes of a building fer as I can see."—February Lippincott's.

The great opportunity you are awaiting is apt to be like to-morrow and never come, unless you peg away to-day with all the little opportunities you can command.

Try This WHALEBONE BUGGY ONE FULL FREE MONTH



OUR ELEGANT 1905 MODEL SHIPPED ANYWHERE ON TRIAL with a TWO Years' Guarantee

This publication is our traveling salesman. We only sell by mail directly to user. We want to interest you in a buggy that will please you in style, general appearance, comfort, finish and durability. We have you \$3 on this buggy. Write for our plan, telling how we ship buggy on

ONE FULL MONTH'S FREE TRIAL

without its costing one cent if you are not satisfied. One of our new 1905 Models introduced in your neighborhood, will mean the sale of many more. A postal will get our catalogue and full and complete plan; this will not obligate you to buy. Read carefully our method of constructing this buggy and liberal plan of selling. If you want a cheap, no-account buggy, don't write. We do not market kind. Every Whalebone Vehicle that goes out of our factory carries a binding guarantee with it signed by an officer of this company.

OUR 1905 CATALOGUE NOW READY. SEND AT ONCE. IT'S FREE. THE WHALEBONE CARRIAGE and HARNESS CO., 105 Sixth St., Cincinnati, Ohio.

32 YEARS SELLING DIRECT

We are the largest manufacturers of vehicles and harness in the world selling to consumers exclusively.

WE HAVE NO AGENTS

but ship anywhere for examination and approval, guaranteeing safe delivery. You are not nothing if

not satisfied as to style, quality and price. We make 200 styles of vehicles and 65 styles of harness.

No. 719. Bike Gear Driving Wagon with 7/8 inch rubber tires. Price complete \$96. As good as sells for \$20 more.

Our large Catalogue is No. 326. Extension Top Surrey. Price complete FREE. Send for it. \$78. As good as sells for \$25 more.

Elkhart Carriage & Harness Mfg. Co., Elkhart, Indiana.

When corresponding with our advertisers always mention the SOUTHERN PLANTER.

THE SUN (Baltimore, Md.)

Now sells for 1 cent, and can be had of every dealer, agents or newsboy at that price. All subscribers in District of Columbia, Virginia, North and South Carolina, Pennsylvania, Delaware and throughout the United State can get The Sun by mail at 1 cent a copy.

THE SUN AT ONE CENT
Is The Cheapest High-Class Paper
In The United States.

The Sun's special correspondents throughout the United States, as well as in Europe, China, South Africa, the Philippines, Porto Rico, Cuba and in every other part of the world, make it the greatest newspaper that can be printed.

Its Washington and New York bureaus are among the best in the United States, and give The Sun's readers the earliest information upon all important events in the legislative and financial centers of the country.

THE FARMER'S PAPER.

The Sun's market reports and commercial columns are complete and reliable, and put the farmer, the merchant and the broker in touch with the markets of Baltimore, Norfolk, Charleston, New York, Chicago, Philadelphia and all other important points in the United States and other countries. All of which the reader gets for 1 cent.

Address A. S. Abell Company, Publishers and Proprietors, Baltimore, Md.

Among the many good stories told by Senator Daniel, of Virginia, is the following:

A gentleman in the South was one day in conversation with a Yankee who had brought letters of introduction from a friend in the North, when it transpired that the Northerner was a veteran of the civil war.

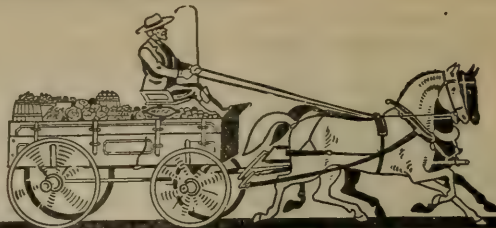
"Yes," said the Yankee, "I was a participant in the late unpleasantness. You see this?" he added, pointing to a scar in his face—"I got that at the second battle of Bull Run."

"How in the world did you get hit in the face at the battle of Bull Run?" mischievously asked the Southerner.

"Oh," responded the Yankee, with the utmost nonchalance, "I suppose I got careless and looked back."

A MISAPPLIED PETITION.

Not long since the choir in one of the fashionable churches of the South rendered a long and difficult anthem—one with many frills and furbelows. The good minister sat patiently through it, but when the anthem was finished he arose and, to the amusement of both congregation and choir, began his prayer in deeply earnest tones, saying, "O Lord, we thank Thee that we are still alive!"—February Lippincott's.



The Prosperous Farmer

has a right to be buoyant, because he carefully prepares his lands at seed-time, and uses liberally EVERY season

Virginia-Carolina Fertilizers,

which bring at harvest-time large, excellent crops—for which the very highest prices are obtained. They come up to and often exceed our guaranteed analysis.

If you DON'T fertilize with these popular brands—you fail to obtain the best results from the care and labor put on your crop, whether it be trucks or any one special product of the soil. If your dealer cannot supply you—write us for information.

VIRGINIA-CAROLINA CHEMICAL CO.,

at any one of these cities:

Richmond, Va.
Norfolk, Va.
Durham, N. C.

Charleston, S. C.
Atlanta, Ga.

Savannah, Ga.
Montgomery, Ala.
Memphis, Tenn.



Turn Fruit into Gold

Orchards, sprayed three times a year with the

SPRAMOTOR

produce 80% more revenue than those alongside of them that have not been sprayed. The Spramotor is an Insurance Policy that meets its own payments. Absolutely prevents Insect and Fungi Pests.

The Canadian Government used two power Spramotors last year to demonstrate the benefits from Co-operative Spraying.

Write for booklet "A". It's free and gives full particulars about Fruit Spraying and its benefits.

SPRAMOTOR CO.

Agents wanted. Buffalo, N. Y., London, Canada.



TAKE NO CHANCES.

Corn varies so from year to year.

We Have the Drop.

A combined single grain and full hill drop.

THE AVERY

Best equipped, most interchangeable and most accurate of any. Ask for Catalogue H.

AVERY MFG. CO.,

Peoria, Ill.

Builders of High Grade Farm and Threshing Machinery.

DAVID C. AVERY & SONS, Baltimore, Md., Agts.

HEREFORD CATTLE

**Registered Stock of Both
Sexes and all Ages for Sale
at most Reasonable Prices.**

Hereford grade Veals and
Steers top the market.

Bull Calves and Yearling
Bulls a specialty.

MURRAY BOOCOCK,

KESWICK, = = = = = = VIRGINIA.

REGISTERED HEREFORD CATTLE AND **BERKSHIRE HOGS.**

EDWARD GAY BUTLER, Annefield Farm, Berryville, Va.



Hereford Herd headed by Prince Rupert No. 79539, whose son Prince Rupert 8th, won first prize in the 2 year old class at the recent Chicago International Show.

Berkshire Herd headed by Baron Premier No. 55227, whose son "Admiral Schley" won first in the 6 to 12 months class at the International Show 1902.

Young stock both calves and pigs
for sale at reasonable prices.

CORRESPONDENCE INVITED.

Grand Champion "PRINCE RUPERT No. 79539.

A GERANIUM RECOMMENDED FOR TABLE DECORATION.

The Madame Salleron Geranium is a stand-by among easily grown plants for daily decorative purposes. Its habit is quite unlike that of the ordinary geranium, which is almost invariably a scraggy, awkward plant unless carefully trained. It never puts forth long branches, as many it has, but they are all short ones, and in a thick mass at the base of the plant. Most of its energies seem to be expended in the production of leaves. Each branch is thickly furnished with them. They are of a pale green, bordered with creamy white. There is so much foliage to a healthy plant that you see nothing but a rounded mass of it. It furnishes a charming background for pink carnations and roses if you see fit to use a few in connection with it. Simply thrust their stems into the soil from which the plant grows, and you have a combination that will always challenge admiration. The ordinary Geranium is considered one of the very easiest of all plants to grow well, but this variety is much easier culture. Indeed, I know of no other plant that requires so little attention. It will take care of itself if you give it water enough to keep the soil about its roots moist all the time. A plant in a six-inch pot will often have as many as two hundred leaves on it. From this some idea can be gained of its decorative abilities. No one need be without material for the decoration of the table at any and all times who has half a dozen of these Geraniums. And they will add quite as much to the beauty of the window as to that of the table. They thus answer a double purpose most effectively.—Eben E. Rexford, in February Lippincott's.

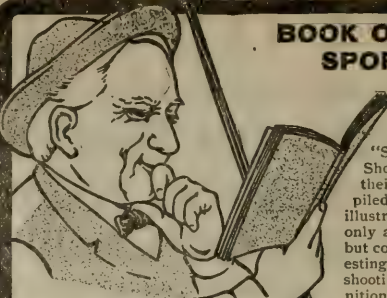
A SYMPHONY IN GRAY.

In the 1905 calendar of N. W. Ayer & Son, the Philadelphia Advertising Agents, is worked out a color scheme in grays and white so harmonious as to merit the above title.

On the background of gun metal gray cover paper is developed in lighter tones their well-known medal trade-mark and motto "Keeping Everlastingly at it Brings Success;" the latter being the predominant feature of the design.

The calendar is a large one, fourteen by twenty-eight inches and designed for office or library. The figures are large and, being printed in white stand out clearly across a large room.

Whether the popularity of Ayer & Son's calendars is due to the uniformly tasteful design, to their utility, or to the epigrams on advertising and business-building which fills the blanks left on the flaps, it is hard to say, but they have enjoyed a steady sale for years at 25 cents each; for this sum, which barely covers cost and postage, the 1905 edition may be had as long as it last.



STEVENS

have always been regarded the highest example of gun making. For accuracy, safety, balance, action, durability and portability "Stevens" Arms are peerless.

"Stevens-Maynard, Jr." (for boys),	\$3.00
"Crack Shot,"	4.00
"Little Krag,"	5.00
"Favorite" No. 17,	6.00

If your dealer won't supply you, order direct.
We pay expressage.

We wanted every lover of out-door sports to know all about the famous "Stevens" Rifles, Pistols and Shotguns, so to make it worth their while to learn, we compiled a valuable 140-page illustrated book, telling not only all about "Stevens" arms, but containing useful and interesting information on hunting, shooting, notes on sights, ammunition, how to handle and care for fire-arms, etc., etc., and this we will send to you free, if you will send us your name and address, enclosing two 2-cent stamps to cover return postage.

Have you tried our CLEVER RIFLE PUZZLE?—it's a puzzler, but "easy when you know how." It will be sent FREE postpaid if you ask for it.

J. STEVENS ARMS & TOOL COMPANY
380 Pine Street
Chillicothe Falls, Mass.

"Paints that Stay Painted."

PAINT is what you need. Do you know that
PAINT will preserve and improve your property?
PAINT will give your property a prosperous appearance.
PAINT will increase the value of your farm. We have
PAINT on hand for everything—
PAINT for roofs and barns. **LYTHITE COLD WATER**
PAINT Carriage and wagon **PAINT**. Our "Standard" house
PAINT is ready-mixed, and for the money no
PAINT can surpass it. Write us for
PAINT prices and color cards.

JOHN W. ATKINSON & CO.,
Richmond, Va.



Blue Ribbon

Garden Seeds



**USED IN YOUR GARDEN THIS YEAR MEAN
BETTER QUALITIES AND LARGER RETURNS.**

AWARDED GOLD MEDAL ST. LOUIS, 1904.

Endorsed by the best Gardeners as the highest qualities obtainable. Send for our SEED BOOK FOR 1905, Mailed free. It's most valuable for information concerning Seeds and Crops comprising Vegetable Seeds, Grass and Clover Seeds, Alfalfa, Rape, Seed Oats, Seed Corn, Potage Crops, and all Seeds for the Garden and Farm.

WOOD, STUBBS & CO., Seedsmen,
LOUISVILLE, KENTUCKY.

MORVEN PARK GUERNSEYS

The Property of WESTMORELAND DAVIS, Esq.

LARGE HERD OF FASHIONABLY BRED REGISTERED ANIMALS, INCLUDING COWS IN THE ADVANCED REGISTRY. HERD HEADED BY THE BRILLIANTLY BRED IMPORTED BULL,

TOP NOTCH No. 9023.

The Dam of this Bull, Imported ITCHEN BEDA, took 1st prize at the "Park Royal" Show in England in 1902, and her daughter ITCHEN BEDA II, took the same honors in 1904: further, Imported TOP NOTCH'S Dam, ITCHEN BEDA, entered the official advanced Registry of the American Guernsey Cattle Club this year with a record FOR THE YEAR of 10642.10 lbs. of milk; 548.70 lbs. of butter fat, equivalent to 640.15 lbs. of butter.

The Pedigree of Imported TOP NOTCH, with some of the achievements and prizes won in the direct line of his ancestry, are given below:

TOP NOTCH, 9023, bred by Sir Henry Tichborne, of England, was sired by Rival, 1343 E, and is out of imp. Itchen Beda, 15627. His father, Rival, by Rival of Mont March, 1164, P. S., out of Clatford Gentle, 4746, E. (first prize English Royal, B. & W. E. and Royal C., 1900). His mother, Itchen Beda, 15627 (see record above); she by Loyal of Hunguets, 978, P. S. (first prize, 1896, second prize, 1898); sire of Itchen Lady, Hayes Lily du Preel. His extended pedigree is impossible in this space, but will be furnished if desired. It goes back to winners of the Queen's prizes, as well as to members of her late Majesty's Prize Herd.

MORVEN PARK is situated in Loudoun County, Virginia, and because of its climate and soil is peculiarly adapted to the production of the highest class of animal life, and particularly to supply the needs of Southern breeders of pedigreed cattle.

REGISTERED and TUBERCULIN TESTED animals for sale, including a fine lot of BULL CALVES at reasonable prices.

For further particulars, Address

LIVE STOCK DEPARTMENT, MORVEN PARK,
LEESBURG, LOUDOUN CO., VA.

WINNERS OF THE "INTERNATIONAL PRIZES."

Southern Planter.—During the summer we offered \$250 cash to party who would guess the correct time Dan Patch would make during the season of 1904. The guess was to include time for mile and also for each quarter. No one guessed correctly as the time was 1:56—1st quarter, :29; 2nd quarter, :28½; 3rd quarter, :29 and 4th quarter, :29½. In view of this, the money was to be given to party making nearest guess.

Mr. Clay W. Holsapple, Red Hood, N. Y., guessed 1:56—1st, :29; 2nd, :28¾; 3rd, :29; 4th, :29¼.

Mr. Raymond Anderson, Walnut Grove, Mo., guessed 1:56—1st, 29; 2nd, :28¾; 3rd, :29; 4th, :29¼.

F. B. & N. T. Probst, Kennedy, Ala., guessed 1:56—1st, :29; 2nd, :28¾; 3rd, :29; 4th, :29¼.

As these three parties have guessed exactly the same, we have divided the money and have mailed to each one our check for \$83.33.

This ends the contest for 1904, but Dan Patch 1:56, is not through with old Father Time and another winter's feeding of "International Stock Food" will surely put him in such fine condition, that he will break more records next year.

Besides breaking the record on mile track Dan Patch broke the world's record for mile over half-mile track at Oklahoma City, Nov. 17th, when he paced a mile in 2:03.

His former owners tried in every way to break the record with Dan before we purchased him, and they failed in every attempt. Since eating "International Stock Food," he has broken eight world records and will add others next year. Keep your eye on "International Stock Food," and Dan Patch 1:56, as they are the greatest combination ever known. They please the people and always accomplish high-class results.

Wishing you a prosperous year, we are,

Very truly yours,
INTERNATIONAL STOCK FOOD CO.

Have you heard from your son?" "Yes, got a letter this morning." "How does he like college?" "Great. He's on the football eleven already." "Is he a good player?" "I should say he was. He wasn't on the team two days when he had a rib cracked, and today's letter informs me that he broke his leg in Saturday's game. I guess that's going it some. Why, Jones' boy has been at college two years, and has never had his hair mussed."

'He had a play produced by an amateur company the other night, I believe. Who was the hero of it, do you know?"

"I was one. I sat through it."

J. S. KEMP'S 20 CENTURY MANURE SPREADER



AS APPLIED ON FIELD IN ACTUAL OPERATION

THE FARMER'S MONEY MAKER

Why the 20th Century is one of the best investments a farmer can make; why it saves time, money, patience, and increases the farmer's bank account; why it is durable, strong, needs few repairs; how it withstands hard usage without harming it; how it increases the fertility value of manure, how it advances the market value of every square foot of ground it runs over, these, with a hundred and one other questions vital to every farmer, are answered in our handsome, new, free catalog No A-20. Write for it. Read it.

The J. S. Kemp Manufacturing Company

Newark Valley, N. Y.

Waterloo, Iowa

THE Smith Great Western Endless Apron.



When you load it you know its parts are equal to their duties.

Every Acre Produces

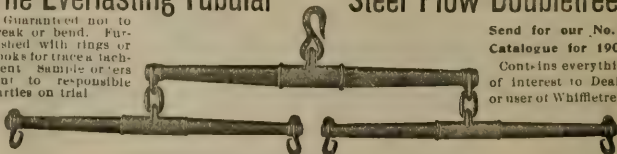
A Third More

by a proper top dressing of manure. The Great Western does it evenly, thick or thin, gives the full manure value—none thrown in chunks or piles to waste. Handles manure in all conditions, and all kinds of fertilizers. Endless Apron, Hood and Endgate, Non-Bunchable Rake, Light Draft, Ball and Socket Bearings, Strength and Durability, are exclusive Great Western features. Sold under strong guarantee. All sizes carried and shipments made from cities in your section. Write for catalogue, showing latest improvements. It tells how to apply manure to secure best results.

Smith Manure Spreader Co., 13 S. Clinton St., Chicago, Ill.

The Everlasting Tubular

Guaranteed not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



Steel Plow Doubletrees

Send for our No. 8 Catalogue for 1904.

Contains everything of interest to Dealer or user of Whiffletrees.

PATTERN No. 105 EQUIPPED WITH FORGED TRIMMINGS.

Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

Pittsburg Tubular Steel Whiffletree Company,
SOLE MANUFACTURERS

PITTSBURG, - - PENNSYLVANIA.

DON'T BUY GASOLINE ENGINES

all one cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost—portable, stationary or traction. Mention this paper. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mfrs., Meagher & 15th Sts., Chicago.

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline engine superior to any other. THIS IS OUR FIFTY-FIRST YEAR.

The Imperial Fruit and Poultry Farm.

We are now booking orders
for EGGS for hatching of the
following varieties—

***S. C. Brown and White Leghorns, Barred and
White Plymouth Rocks, Silver-Laced
and White Wyandottes.***

SATISFACTION GUARANTEED.

R. R. HEYDENREICH, Mgr., Staunton, Va.

POULTRY DEPARTMENT.

BILTMORE FARMS.

BILTMORE, NORTH CAROLINA.

THE HOME OF THE UTILITY BREEDS.

Plymouth Rocks, BARRED and WHITE Wyandottes, WHITE AND GOLDEN

.... R. C. and S. C.

**LEGHORNS,
BROWN AND WHITE.**

**TURKEYS,
BRONZE AND WHITE.**

PEKIN DUCKS.

Our birds of these popular utility varieties won twenty-eight regular and special premiums at the World's Fair, St. Louis, Mo. MORE THAN DOUBLE THE NUMBER OF ANY OTHER EXHIBITOR FROM THE SOUTHERN STATES.

Our great prize record of 2,028 prizes, won at such shows as the World's Fair, Charleston Exposition, Atlanta, Washington, Hagerstown, was made principally with birds of our own breeding. As we breed and exhibit only the popular utility varieties, we meet with the hottest competition in all these shows.

Our birds have been bred in line for eight years, and can be depended upon to transmit their good qualities to their offspring.

We have a large lot of choice Cockerels and females on hand for sale at reasonable prices.

Eggs for hatching from our best prize matings are worth \$1.00 to \$5.00 per setting.

Send for Poultry Circular, giving a description of our matings for the coming season.

BILTMORE FARMS, Biltmore, N. C.

NOTE: We must sell at least one thousand birds raised from our 1904 prize mating to clear our home runs for the 1905 matings, that we have just made. They are going quick; but please make them go quicker yet by sending us an immediate order. We are certainly giving a little better value than ever before for every remittance, and will gladly place our birds in competition with anything you can buy at the same price elsewhere, QUALITY CONSIDERED.

BILTMORE FARMS, Biltmore, N. C.

YAGER'S CREAM CHLOROFORM LINIMENT

Is a never failing Pain Remover; it is a standard and reliable home remedy, always ready to kill pain from any cause; it is to be found in every up-to-date stable or barn, as it is recognized as the best of liniments for stable use. It is truly a LINIMENT FOR MAN OR BEAST, and should be a part of every farmer's outfit—in fact, he cannot well afford to be without it.

Mr. HENRY MYERS, of Bridgeport, Conn., says:

"I have used YAGER'S LINIMENT for two years; it is the only thing that gives me relief in my back."

Mrs. A. H. McLAUGHLIN, of Petersburg, Va., writes:

"I can speak in highest praise of YAGER'S LINIMENT. I suffered greatly with a severe pain in my back. Yager's Liniment cured it. For many nights I could not sleep from a sprained wrist; Yager's Liniment cured it. I had something like a wen on my left shoulder that worried me considerably; I bathed it several times with Yager's Liniment and in less than a week it was gone."

Mr. W. M. STUBBS, of Plymouth, N. C., writes:

"I have recently used YAGER'S LINIMENT for a mashed foot; it acted like a charm, and I believe it to be the best external remedy on the market."

Mr. DAVID BRADLEY, of Wilscot, Ga., writes:

"I have suffered for a long while with rheumatism, and YAGER'S LINIMENT gave me so much relief that I never want to be without it."

Mr. ISHAM TRICE, of Chapel Hill, N. C., says:

"I must write a few lines of gratitude for Yager's Liniment. Recently I wrenched my shoulder severely and went to the drug store for something to relieve it, and a large bottle of YAGER'S LINIMENT was offered me for 25c. I was tempted to refuse it; could not believe it was any good, but since using it I must say it gave me quicker relief than I could believe was in it."

YAGER'S LINIMENT is put up in a large bottle, as is shown by the cut of the package, but it is as good as it is big, and at 25c. per bottle is within reach of everybody—and everybody uses it in preference to any other Liniment because there is none other so good. YAGER'S LINIMENT is sure; it NEVER FAILS to relieve pain—try it.

FOR MAN OR BEAST—YAGER'S LINIMENT IS JUST RIGHT.

YAGER'S

APPLYING TO PNEUMATIC POINTS

APPLYING TO CHLOROFORM

TRADE MARK

CHLOROFORM

POPULAR

SOOTHING & EFFECT

QUICK HEALING POWERS.

IN THE TREATMENT OF DISEASES REQUIRING AN EFFICACIOUS EXTERNAL REMEDY.

BEWARE OF IMITATIONS.

PREPARED ONLY BY

GILBERT BROS. & CO.

SOLE PROPRIETORS

BALTIMORE, M.D.

U.S.A.

REGISTERED U.S. PAT. OFFICE

WHEN YOU GET YAGER'S FOR 25 CENTS, WHY TAKE A SUBSTITUTE?

EXACT SIZE OF BOTTLE.

TAKE NO SUBSTITUTE.

FINE STOCK AT "LYNNWOOD."

Editor Southern Planter:

I have in my Percheron stud, mares that I selected in the West and all of them good big ones with plenty of bone. When I bought them, I did not go to the breeder and ask for his cheapest stuff, as I knew that the cardinal principle in breeding up and improving stock was to select those best in breeding and pedigree. Some of my mares, I bought at public auction in Illinois and others I bought at private sale. I did not go into the business of breeding Shorthorn cattle, Berkshire hogs and Percheron horses for the sake of going into some business to invest surplus cash, or for pleasure; but with the idea of making a living and educating my children; it was necessary for me to borrow a great deal of money, not being even comfortably well-off, and I have never regretted my action in this particular. I always kept my best young stock as breeders, except in one instance, where I thought I had put a prohibitory price on two yearling fillies, but it seemed not as the gentleman to whom I priced them took them without giving me a chance to reconsider my offer.

I paid \$125 for a bull calf at 6 months old. I also paid \$150 for a heifer on the chance of her being with calf by a great bull, and good luck coming my way, this heifer dropped a bull calf, which I now own, and is one of my herd bulls. As mentioned above, I tried to start right, and my stock today is proof positive that I did, as my young ones are better as a rule than their sires and dams. I will not use or breed from a pedigreed "scrub." If an animal's conformation and breeding are not both of the best, I do not want him, nor do I use him.

I have a neighbor who is using a boar which was farrowed for me, and the pig was never right. When about 8 weeks old, I told one of my men to kill it; a fellow standing by, said "I will take chances on his making a 'killer' for \$1.00." I let this fellow take him. Afterwards my farmer neighbor bought him, remarking that he was a pure bred, and ought to be a good sire. If this is true that all well bred things are all right, then our prisons should not hold as they do, so many criminals bred from honest and respectable parentage. We all know, or should know, that it is much easier to go down hill than up, and it is the same in stock-breeding. Improvement is hard, but it is easy to deteriorate your stock by early breeding and neglect.

Yours truly,

JOHN F. LEWIS.

Rockingham Co., Va.

"I dislike to keep you in after school," said the teacher. "Aren't you sorry you were naughty and have to stay?"

"No'm," replied Johnny. "Pie-face is waiting out there to lick me."

Established 1828.

76 Years.

Buist's Garden Seeds.

OUR SPECIALTY is the growing of Garden Seeds from Selected Seed Stocks. The great importance of following this system for the production of seeds to insure fine vegetables is familiar to all gardeners; if vegetables from which seeds are grown are inferior or impure, so must their product be.

IF YOU HAVE A Garden, send for BUIST'S GARDEN GUIDE, for the South; edition for 1905 now ready.

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IF YOU ARE A Country Merchant, send for OUR WHOLESALE TRADE PRICE LIST, now ready.

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TREES

Fruit and Ornamental Trees, Shrubs, Roses, Grape Vines.

A large assortment of the Finest Varieties.

Send for new edition of Catalogue if you contemplate planting.

We desire to engage a number of reliable, energetic agents to represent us during 1905. Salary or commission. Write for terms.

We have an extra large stock of Strawberry plants that we will be pleased to quote on application.

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W. T. HOOD & CO.,

OLD DOMINION NURSERIES,

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We make a specialty of handling dealers' orders

ALL STOCK TRUE TO NAME.

Apples,	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

... AGENTS WANTED. ...

FRANKLIN DAVIS NURSERY CO.,

Baltimore, Md.

YET TO COME.

Blanche, Wilbur, and Thomas were in the garden playing and making a great deal of noise, but small Jack sat in a corner very quietly, which for Jack was an unusual proceeding. After watching them for some time the mother's curiosity prompted her to ask:

"What are you playing?"

"We are playing house," answered Wilbur. "Blanche and I are the mother and father, and Thomas is the child."

"And what does Jack do?"

"Sh, sh! he isn't born yet."—M. I. Copinger.

Mr. Nesbit, who had painted a picture of the noble redman in war-paint and feathers, wanted an unbiased opinion of his work. His wife said that the picture was the best thing of the kind that she had ever seen. His dearest friend, too, was decidedly enthusiastic. Both declared, in short, that anyone would know at a glance that it was intended for an Indian.

"To tell the truth," said Nesbit, looking somewhat doubtfully at the picture, "I haven't a great deal of confidence in either of you. You always praise everything I do. Now, I'm going down to the street to see if I can find some person who can be depended upon to give me an absolutely unprejudiced opinion of this picture—a child for instance. Children always tell the truth."

Five minutes later Nesbit returned with three small boys, whom he had found playing in the street.

"Now, boys," he said, "take a good look at this picture. I'll give each of you ten cents if you'll tell me just exactly what you see."

"A rooster!" shouted the three boys, simultaneously.

Daniel J. Sully, the dethroned cotton king, made a trip through the South, and when he came back he told a story of an old negro, who had been working for a cotton planter time out of mind. One morning he came to his employer and said:

"The gwinter quit, boss!"

"What's the matter, Mose?"

"Well, sah, yer manager, Mistah Winter, ain't kicked me in de last free mums."

"I ordered him not to kick you any more. I don't want anything like that around my place. I don't want any one to hurt your feelings, Mose."

"Ef I don't give any more kicks I'se goin' to quit. Ebbery time Mistah Winter used ter kick and cuff me when he wuz mad, he always gitt 'shamed of hisself and gimme a quarter. I'se done los' enuff money already wid dis heah foolishness 'bout hurtin' ma feelin's."

"Now do your worst," the hero cried

Unto the villain bold.

They saw him act, and then they sighed,

"He did as he was told."

Awarded Two Grand Prizes at St. Louis Exhibition, One for Seeds and another for Vegetables.

Thorburn's Seeds

For over a hundred years have been universally recognized as the standard of excellence. * * *

Our Great New Potato Noroton Beauty

This is the most valuable introduction of the past half century. During that period we have done more for the improvement of the Potato than every one else combined. Beginning with the famous WHITE PEACH BLOW forty years ago the path of progress is marked with our introductions, many of which are household words the whole world over, BEAUTY OF HEBRON, WHITE ELEPHANT, RURAL NEW YORKER, CARMAN NOS. 1 AND 3—all ours. The NOROTON BEAUTY, now offered for the first time, eclipses them all. Our Catalogue gives full description and testimony of many experts who have tried it.

It is the earliest potato ever grown being sixteen days earlier than the Early Rose, yet it is as productive as any main crop or late sort. It is handsomer in appearance and more uniform in size and shape than any other sort. The tubers are all of marketable size, and they ripen all at the same time, a fact which combined with its extreme earliness does away with all danger from blight or disease or bugs. Its table quality is superb, and it keeps good longer than any other sort early or late. It is far and away the BEST! ALL-ROUND POTATO IN EXISTENCE, and the farmer or gardener who fails to get stock seed of it now will surely feel left a year hence. Even one pound will insure a good supply of stock seed, it being so enormously productive.

Price, 1 pound 75 cents, or by mail or express 85 cents; 2 pounds \$1.30, or \$1.50 express prepaid; 4 pounds \$2.40, or \$2.75 express prepaid; 8 pounds \$4.25, or \$5.00 express prepaid.

Price on larger quantities quoted on application.

OUR CATALOGUE—the 104th successive annual edition—contains a more complete assortment and fuller cultural directions than any other seed annual published. It is beautifully illustrated with the finest half-tones and a superb colored plate of our great new potato "Noroton Beauty." It contains 144 large size pages, and is in every respect and without exception the most complete, most reliable, and the most beautiful of American Garden Annuals. We will mail it FREE to all interested in gardening or farming

J. M. Thorburn & Co.,

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Over one hundred years in business in New York City.

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—WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF—

APPLES, PEACHES, Pears, CHERRIES, PLUMS, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

WINGS AND FEATHERS.

When the melancholy Job, who four thousand years ago wrote "Garest thou the goodly wings unto the peacocks? or wings and feathers unto the ostrich," he little realized how in future time the wings and feathers would create a vast trade among civilized nations and result in immense profits to fortunate investors. The American ostrich has begun its remarkable career with us and is now supplying profits to various ostrich farmers located beneath sunny skies all the way from the Atlantic to the Pacific. The climates of California and Arizona have proved particularly healthy for this form of fowl, and now some half dozen ostrich farms are in full force and effect on the Pacific slope. It is from the inquisitive curiosity of the vast army of tourists that haunt Southern watering places that a considerable revenue by the ostrich farmer is now derived. These wealthy people have nothing to do in these semi-tropic climates but to visit curious sights and scenes, and these ostrich farms, built for their convenience and not the comfort of the ostriches, form interesting exhibits that delight the wandering idlers. All ages of ostrich life are represented; small houses and sheds contain incubators, where dozens of monstrous ostrich eggs may be observed awaiting the fullness of time, when little brown ostriches will emerge into the ever-springing sunshine. Pens are occupied by year old ostriches and others by mating pairs, for these have to be segregated, as the male ostrich during the breeding season is quite vicious and belligerent, seeking to attack all who venture near the family nest.

Perhaps the most successful ostrich farmer in America is the pioneer, the man who ventured over from Africa in a small sailing ship with about four dozen of these elongated creatures in the hold of the vessel. After struggling for a dozen years, watching his imports die and their progeny mature, he ventured into the show ostrich farm business once more, and advertised his freak display to the sun-scorched residents of Los Angeles and the perigrinating tourists. Some little success attended his efforts, and at last he began to be independent of the annual English remittance that had so encouraged and comforted him while he dwelt in the bucolic region of Orange county cultivating his ostriches. After a few years of comparative success he ventured to advertise the California ostrich feather to the ladies of the land in the domestic magazines that enjoy so vast a circulation; a few hundred dollars thus spent showed such remarkable results that the next sea-



POWER OF THE MACHINE: 256 TONS.

This is our new Twentieth Century Stump Puller, made of semi-steel, specially adapted for clearing land of all kinds and sizes of trees, stumps, grubs and brush. This machine will clear from one to five acres a day, doing work equal to twenty men. Every machine is equipped with our patent 25-foot Anchor rope, 1 inch diameter; 30-foot pull rope, 3/4 inch diameter; one improved Snatch Block, 30-foot Hitch Rope attached, 1 inch diameter; short Anchor Loop, for light pulling; Automatic Sweep lift; Pawl; Key; the necessary bolts, and everything complete except the cross-pole and sweep, which are cut in the timber where the machine is to work. We will lay this machine down at your nearest railroad station, freight paid, without any \$100. further expense to you, for

Warrant and Guarantee. Every Smith machine is warranted against breakage, and is sold under a positive guarantee to give satisfaction or money refunded.

Terms: Send \$17. with your order, to guarantee freight charges, and we will make shipment and collect the balance C. O. D.

W. SMITH GRUBBER CO. LA CROSSE, WIS. U. S. A.

The Spraying Season



Will soon be at hand. In order to be prepared let us send you catalogue, so that you may select the size and style Pump suited to your requirement.

Small Boilers, Feed Cookers, Gasoline Engines, Wind Mills, Tanks, Rams, and Country Plumbing.

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Granulated Sugar, per pound.....	6½c.	Breakfast Bacon, per can.....	12½c.
Arbuckle's Coffee, per pound.....	13½c.	Best Cream Cheese, per pound.....	14c.
Good Salt Pork, per pound.....	6c.	Best Water Ground Meal, per bushel.....	65c.
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Mother's Oats, per package.....	9c.	Smoked Bacon, per pound.....	11c.
American Oats, per package.....	7c.	Small Can Good Luck Powders.....	4c.
Dunlop Flour, per barrel.....	\$6.00	Large Can Good Luck Powders.....	8c.
Daisy Flour, per barrel.....	5.75	Large Prunes, per pound.....	8c.
Pillsbury Flour, per barrel.....	7.00	Three Plugs Peach, Grape, Plum and Sun Cured Tobacco for.....	25c.
Cut Herrings, per dozen.....	8c.	Can Corn, per can.....	8c.
Roe Herrings, per dozen.....	15c.	Sun Dried Apples, per pound.....	7c.
Cut Herrings, half barrel.....	\$2.00	Old Crown Rye, per gallon.....	\$3.00
Roe Herrings, half barrel.....	2.50	Old Star Rye, per gallon.....	2.50
Salt, 200 pound sacks.....	85c.	Old Excelsior Rye, per gallon.....	2.00
Salt, 100 pound sack.....	45c.	Old Capitol Rye, per gallon.....	1.50
Sugar Cured Ham, per pound.....	14c.	Virginia Mountain Whiskey, per gallon.....	3.00
Best Timothy Hay, per ton.....	\$17.00	Geneva Gin, per gallon.....	2.50
Best Bran, per ton.....	22.50	London Dock Gin, per gallon.....	2.00
Brown Stuff, per ton.....	23.00	Pure Apple Brandy, per gallon.....	2.50
Ship Stuff, per ton.....	24.00	Good N. C. Corn Whiskey, per gallon.....	2.00
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Coarse Meal, per ton.....	25.00	Blackberry Wine, per gallon.....	60c.
Mackerel in Kits, per kit.....	1.00	Catawba Wine, per gallon.....	60c.
Lake Herring in Kits, per kit.....	75c.	Old Gibson Whiskey, per gallon.....	\$3.50
Table Peaches, per can.....	12c.		
Large Can Tomatoes.....	7c.		
Small Can Tomatoes.....	6c.		
Lump Starch, per pound.....	4c.		
Sardines, per can.....	4c.		

Ten cents extra per gallon charged for jugs. These prices are subject to market's changes. All prices f. o. b. here. Drayage free.

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**STORES: { 1724 East Main Street, Phone 507,
501 North 25th Street, Phone 1865,
RICHMOND, VA.**

son he was induced to double his advertising expenditure in this direction. Women all over the land became interested in the California ostrich feather, and the result became apparent in Pasadena; at the little remote ostrich farm beneath the shadow of the Sierra Madre mountains arrived daily thousands of letters containing thousands of dollars, sent by the waiting fair of the East and North for the product of the California ostrich. Gold poured in such astonishing amounts upon the bewildered and gratified "remittance man," that he became a local Ceresus; is now the president of several banks, and can safely estimate his profits on the sale of ostrich feathers at the rate of a quarter of a million dollars a year. He has discarded the little two-wheeled dog cart and cob that lugged him around the country some few years ago, and now rides from one of his farms to the other in a five thousand dollar automobile. He has purchased most of the land between Los Angeles and Pasadena, and has built a magnificent mansion, in which he dwells surrounded by a hundred servants and a large, interesting family. Few transplanters or pioneers of a new trade have been so rewarded after such a narrow experience. He now owns five hundred ostriches and contains three ostrich farms, while his investments in local real estate have been most fortunate. And he is not the only successful ostrich farmer in the land; but he is the most successful! all the others have made money; indeed, the proprietor of a small ostrich farm at Riverside, consisting of seven ostriches, has bought large quantities of land and built a brick bungalow out of his feather and admission profits. A widow in Arizona owns nearly a thousand ostriches, and is successfully vending them to all who desire to embark in this most lucrative proposition.

There are three sources of income open to the average American ostrich farmer at the present time—first, the sale of the feathers to the women, who never tire admiring these beautiful creations furnished by the ostrich; then, the admission fees paid by tourists and others to see the ostriches; the Pasadena man takes in over twenty thousand dollars a year from this source alone, and all the other Ameri-

THE HIGHEST MARK OF MERIT GIVEN

AT THE WORLD'S FAIR

on farm implements was captured by the Johnston Harvester Co.'s Exhibit of binders, mowers, disk harrows, disk cultivators, headers, tedders, rakes, etc. When it is understood that to get this Grand Prize Award these implements must score between 95 and 100 points in value of usefulness, construction, improvements, quality, and superiority, over all competition, which included makes of many of the largest manufacturers in the world, it will be clearly evident that the Johnston line of farm implements are the kind to buy. It proves conclusively that

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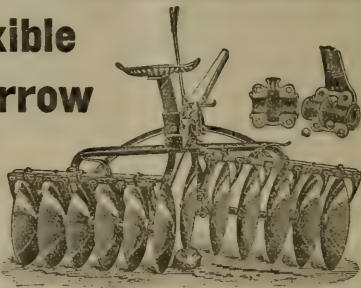
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Spring Flexible Disc Harrow

Only Harrow in the world with Independent adjustable spring pressure upon inner ends of disc gangs. Any amount of pressure thrown on these inner ends by foot. Ball-bearing. Works uneven ground. All sizes, at proportionate prices.



Seasonable Implements of the latest style, always up-to-date. Possibly you are now or will soon need a Corn Sheller, Feed Cutter, Disc Plow. You can get our Catalogue for the asking.

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New Steel Roofing and Siding \$2.00 per 100 Sq. Ft.

Painted red on both sides. Most durable and economical covering for Roofing, Siding or Ceiling for Residences, Houses, Barns, Sheds, Elevators, Stores, Churches, Poultry Houses, Cribbs, etc. Easier to lay and will last longer than any other covering. Cheaper than shingles or slate. No experience necessary. A hammer or hatchet the only tools needed. It is a very hardfaced high grade steel, equal in price for the best. Corrugated as shown in cut, or "C" crimped or standing seam roof, siding or ceiling, etc. We also Pressed Bricks, Siding and Ceiling. Roofing and Siding at \$2.25 per 100 Square Feet. Thousands of buildings throughout the world are covered with this steel roofing and siding, making their buildings

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Send in your order for a price schedule as you may need to cover your new or old building. Time will prove it and your own eyes. Withstands the elements, best of all roofings. At prices noted in this advertisement.

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to all points East of Colorado except Indian Territory, Oklahoma and Texas. Write for prices for shipment to such points. Ask for further particulars. Immediate shipment if you will as your order at once. Satisfaction guaranteed or money refunded. Our special Catalogue No. K-146 tells all about this roofing. It also quotes low prices on Building Material, Wire, Pipe, Plumbing, Nails, Doors, Furniture, Household Goods, Dows, Spouting, Eave Troughs and thousands of other items bought by us at wholesale and received at sales.



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LEE'S ==PREPARED== AGRICULTURAL LIME

For COTTON When used on land with a fair amount of vegetation or with COMPOST [which is better] the crops are as good as from any Fertilizer. It prevents RUST and SHEDDING, and keeps the plants green much longer in dry weather.

PEANUTS With the same conditions as above, it is a COMPLETE FERTILIZER for this CROP. (Our customers say it is equal to the BEST FERTILIZERS ON THE MARKET.

DARK HEAVY TOBACCO Haul out your farm pen scrapings, plow under and broadcast 500 to 1000 lbs. per acre [the earlier the better], and you will get a heavy crop of tobacco and a fine crop of Wheat and Clover or other grass, and by proper rotation will have a

rich lot for any crop.

BRIGHT TOBACCO Our customers say that 200 lbs. per acre in the drill with other Fertilizer will prevent the tobacco from FIRING and giving it a GOOD BODY and increase its value \$ 0 per acre. For Wheat, Oats, Clover and other grass it is exceptionally good.

LEE'S EXCELSIOR TOBACCO FERTILIZER, Specially adapted to dark shipping tobacco.

LEE'S HIGH-GRADE BONE and POTASH, special for Corn, Sweet Potatoes, all kinds of vegetables.

Lee's Special Corn Fertilizer for land devoid of vegetation, equal to any on the market.

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No. 1 BUILDING LIME, in car load lots direct from Kiln, LOWEST MARKET PRICE.

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Bay horse, 16.1; 1,300 pounds, by Falestto; dam, Addie C., by King Alfonso.

One of the handsomest thoroughbreds in America, and a sure success as a getter of race horses."—Major Dalgardfeld.

ROEHAMPTON, chestnut horse, 16 hands, by imp. Bathampton, dam Agnes Flash. Roehampton was a great race horse. Fee for either horse \$50 cash, approved half bred mares, \$20. Address DION K. KERR, Manager Antrim Stock Farm, Warrenton, Va.

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"The Gentleman in Black."

Winner of the Criterion Stakes, Pelham Handicap, Brooklyn Derby, Belmont Trial and Tidal Stakes.

Black horse, by Powhatan, dam imp. Invercauld, by St. Albans; 2d dam imp. Eleanor, by Voltigeur; 3d Thems, by Touchstone. Fee \$50 for season of 1905, with usual return privilege. For particulars,

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WOODMONDE STOCK FARM,
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FOR SALE,

at a price which he can earn with ease in a single stud season, the registered trotting stallion

LEPANTO, 0577,

He is a rich bay in color, stylish and handsome, 15½ hands high; weight 1,200 pounds. Address

BANNISTER & RHODES, Owners, Roanoke, Va.

KELLY, 22623.

Record 2:27 Sire of McChesney, 2:16½, etc.

Bay horse by Electioneer 125; dam, Esther, dam of Expressive, 3, 2:12½, and 3 others in the list; Kelly represents the highest type of a trotter, having fine size and the form and finish of a thoroughbred. For terms of service and keep of mares, address W. J. CARTER, P. O. Box 929, Richmond, Va., or 1102 Hull street, Manchester, Va. Phone 3380.

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Representing "The Times-Dispatch" and "Southern Planter," Richmond, Va.; "Kentucky Stock Farm," and "The Thoroughbred Record," Lexington, Ky.; "Sports of the Times," New York, and the "Breeder and Sportsman," San Francisco, Cal.

FOR SALE,

Some choice thoroughbred brood mares, bred to Chorister. Address DION K. KERR, Antrim Stock Farm, Warrenton, Va.

PRINCE HENRY, Trotter

Chestnut horse, 16 hands high; foaled 1902 by Patronage, 4143, dam Hazel Eye, by Sir Walter, Jr., 2:18½. Patronage got Aliz, 2:03½.

Valmont, thoroughbred chestnut horse, by Norwood, dam Jeannette, by Northumberland. Fees, \$10 season; \$15 insurance. Address L. L. WALLACE, Amelia, Va.

Andrew Carnegie, 38961.

Bay horse, foaled 1903, by Giles Mebane, 2:16½, son of John R. Gentry, 2:00½; dam, Virginia Menefee, 2:32, by Gregorian, 1:51; second dam, Minnie Roach, by Aristos, 7:1.

Note.—John R. Gentry was twice crowned King of racing stallions, and is considered the most beautiful of all champion pacers.

ANDREW CARNEGIE,

Will be permitted to serve mares during 1905, at \$25 the season, with return privilege. Address RIVER FALLS FARM, Graham, N. C., or J. W. MENEFEE, Greensboro, N. C.

Plain Dealing Farm,

Property of W. N. WILMER.

VIRGINIA CHIEF, 26267,

Black horse, 16 hands high, weight, 1,200 pounds. Sired by Kentucky Prince, 2479; dam Nina, by Messenger Duroc, 106. Fee, \$10 season; \$15 insurance.

ABEINER, 30932,

Chestnut horse, 15½ hands, weight 1,100 pounds. Sired by Virginia Chief, 26267; dam Abena, by Alban, 5322.

Fee, \$8 season; \$12 insurance.

PLAIN DEALING, 30921,

Chestnut horse, 15½ hands, weight 1,050 pounds. Sired by Virginia Chief, 26267; dam Barbara, by Alcantara, 729. Address PLAIN DEALING STOCK FARM, Scottsville, Albemarle Co., Va., or W. N. WILMER, 49 Wall street, New York.

can ostrich farmers acquire large profits by this eternal curiosity. Lastly, the sale of stock to those desiring to go into the business, or to menageries or zoological gardens is steady and remunerative; little ostriches that have just broken their immense shells are sold in the open market at the average price of three hundred dollars per dozen; "frys," or those of six months' age are worth fifty dollars each, while matured and guaranteed layers are cheap at a hundred and fifty per fowl. As a pair of healthy California ostriches has been known to multiply to the extent of forty ostrich chicks per annum, it will be seen that considerable profit attaches to this part of the business. The cost of keeping the creature is quite trifling, for the ostrich will eat anything and everything; old oranges that have been lying on the ground under the orange trees for weeks do very well for the ostrich—in fact, sawdust, if it had any nutritive quality, would be excellent food; what remains of grapes after they have passed through the wineries are fed to the ostriches in large quantities in California; so the annual expense for food per individual ostrich may be considered as extremely trifling. Very few men need be employed to look after a thousand ostriches; the birds stand around all day scratching each other and awaiting the regular arrival of the man with the provisions; they are quiet and peaceable, and give no trouble at all.

E. H. RYDALL.

"What kind of fish have you hereabouts?" asked the stranger. "Oh, most kinds." "I hope there are some game fish to be had," continued the man from Maryland. "Tell me, what was the weight of the largest fish ever caught in this region?" "Well, sir," responded the West Virginian, "we don't never take no weighin' machines with us when we fish, so I wouldn't like to say, being an honest man, just how much that last trout of mine did weigh. But, stranger, I don't mind telling you that when I pulled that fish out of the water the river went down a foot!"

Seed House of the South.

RED CLOVER,
HAMMOTH CLOVER,
CRISPIN CLOVER,
WHITE CLOVER,
LUCERNE CLOVER,
ALSYKE CLOVER,
BOKHARA CLOVER,
JAPAN CLOVER,
BUR CLOVER,



TIMOTHY,
ORCHARD GRASS,
RED TOP or HERDS GRASS,
KENTUCKY BLUE GRASS,
RANDALL GRASS,
TALL MEADOW OAT GRASS,
JOHNSON GRASS,
GERMAN MILLET,
BUCKWHEAT,
OATS and
CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are
RAGLAND'S PEDIGREE TOBACCO SEEDS.

WE ALSO SELL

Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods.
Samples sent by mail when desired.

Wm. A. Miller & Son, 1016 Main Street, LYNCHBURG, VA.

A neat Binder for your back num-bers can be had for 25 cents. Address our Business Office.

LOCK UP YOUR LETTERS



SECURE AS A BANK VAULT.
A LUXURY TO ANY ONE.
A NECESSITY TO EVERY ONE.

SAFE!!! PRIVATE!!!

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...Steel Safety Box... FREE!

STRONG LOCK, INTRICATE KEY, LARGE, ROOMY.

BRILLIANT BLACK, TRIMMED IN MAROON AND GOLD.

THE KIND BANKERS USE. CONTENTS SAFE AS A BURIED TREASURE,
HIDDEN FROM THE EYES OF ALL BUT THE RIGHTFUL OWNER.

Write us, and WE WILL TRUST YOU WITH 20 PACKAGES of Brauer's Ivory White Baby Cream to sell for us at 10c. each. When sold send us the money and WE WILL AT ONCE SEND YOU THE STEEL SAFETY BOX.

The Baby Cream sells on sight. Keeps children's skin in perfect condition. Cures every skin trouble. Gives instant relief. Elegantly perfumed. Delicately medicated. Antiseptic. Snow white. Ladies use it on themselves. It keeps their skin like velvet. No expensing to do. Circulars tell all about it.

WRITE AT ONCE AND EARN THIS ELEGANT STEEL SAFETY BOX. BRAUER CHEMICAL CO., 427 POSTAL BUILDING, NEW YORK.

HERE IT IS AGAIN:

The "STAR" CORN PLANTER,

The Corn Planter Made
Especially for Southern Corn
and Pea Planting.

REMEMBER—We Furnish Them With Hoe Opener When Desired.

IT DOES, and does well, everything a planter should do.

Drills or drops at any distance any number of grains. It handles corn, peas, beans, etc., equally well.

It is built to stand hard use. Frame of steel.

EVERY GRAIN IS SEEN AS IT FALLS to the ground; no skipping and waiting for the corn to come up before knowing it

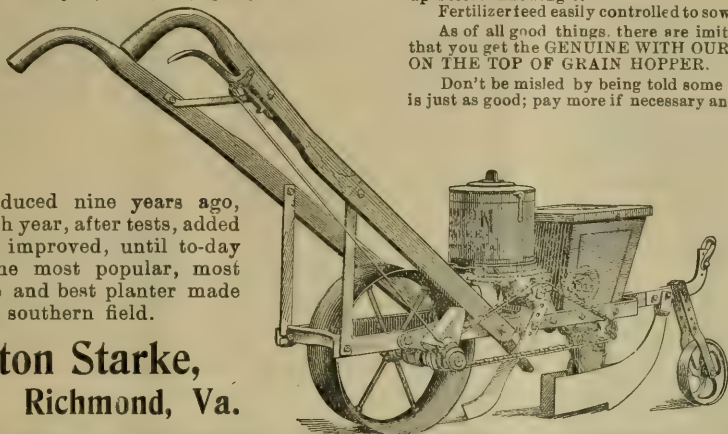
Fertilizer feed easily controlled to sow much or little.

As of all good things, there are imitations, but see that you get the GENUINE WITH OUR NAME CAST ON THE TOP OF GRAIN HOPPER.

Don't be misled by being told some other Planter is just as good; pay more if necessary and get a "Star."

Introduced nine years ago, and each year, after tests, added to and improved, until to-day it is the most popular, most durable and best planter made for the southern field.

Ashton Starke,
Richmond, Va.



The Power Behind the Style

In other words, Quality is what gives the customer real satisfaction and the dealer a trade he can look forward to. But in these days of so many imitations it is sometimes hard to tell the false from the true.

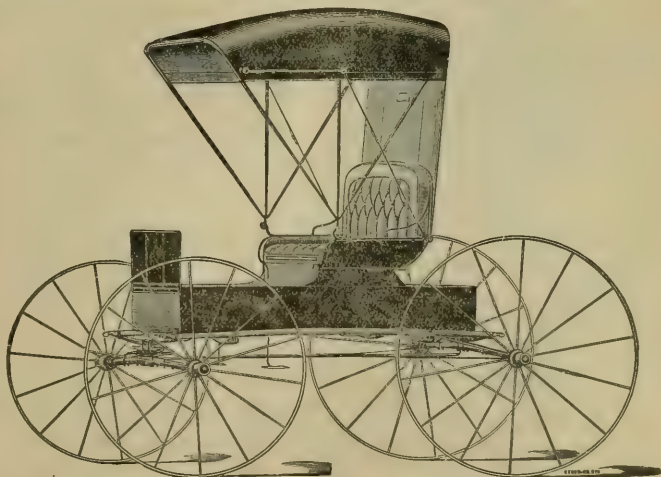
You know a little paint and varnish will cover a multitude of defects in construction, therefore when ordering vehicles it is well to look for a line with an honest reputation, and such is comprised of

VIRGINIA-MADE VEHICLES.

They contain "no hinge or loop to hang a doubt on."

They're true blue all through, and are priced to please the people and profit the dealer.

We've proved it to others—how about you?



RICHMOND BUGGY AND WAGON CO., 1433 E. Main Street, Richmond, Va.

W. G. ADAMS Sales Manager.

CLUBBING LIST.

In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

DAILIES.

With
Alone. S. P.

Times-Dispatch, Richmond, Va.	\$5 00	\$5 00
Times-Dispatch (without Sunday)	3 00	3 00
News-Leader, Richmond, Va.	3 00	3 00
The Post, Washington, D. C.	6 00	6 00
The Sun, Baltimore, Md.	3 00	3 40

THRICE A WEEK.

The World, New York	1 00	1 25
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WEEKLIES.

Times-Dispatch, Richmond, Va.	1 00	1 25
Central Presbyterian, Rich- mond, Va.	2 00	2 25
Religious Herald, Rich- mond, Va.	2 00	2 25
Southern Churchman, Rich- mond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	2 00	1 75
Country Gentleman	1 50	1 75
Hoard's Dairyman	1 00	1 30
Horseman	3 00	3 00

SEMI-MONTHLY.

Kimball's Dairy Farmer...	1 00	75
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MONTHLIES.

The Century	4 00	4 25
St. Nicholas	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's	3 00	3 25
Frank Leslie's	1 00	1 25
Cosmopolitan	1 00	1 35
Everybody's	1 00	1 35
Munsey	1 00	1 35
Strand	1 25	1 65
Madame	1 00	1 00
Argosy	1 00	1 35
Review of Reviews	2 50	2 75
Field and Stream	1 50	1 50
Woman's Home Companion ..	1 00	1 25
Poultry Success	1 00	75
Blooded Stock	50	60
Successful Farming	1 00	60
Southern Fruit Grower ..	50	85
Wool Markets and Sheep ..	50	75
Commercial Poultry	50	75

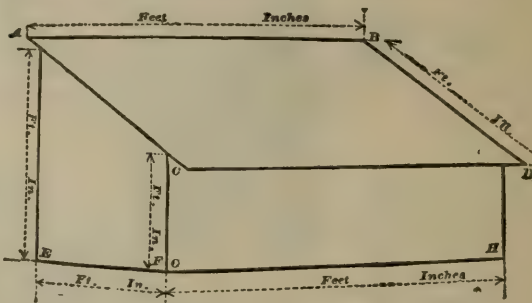
When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with Southern Planter."

We cannot under any circumstances furnish sample copies of other publications.

We will cheerfully quote our best price on any list of publications submitted to us.

ROOFING OF ALL KINDS.

Painted Corrugated Roofing, Painted V. Crimp Roofing, Roofing Tin in boxes or rolls, Tarred Roofing Felt, Perfected Granite Roofing. & &



Send us the DIMENSIONS OF YOUR ROOF, stating KIND OF ROOFING wanted, and we will quote you on sufficient quantity to cover it.

You can ADD YEARS to the life of your roof by painting it with our

Magnet Red Roofing Paint.

1 gallon will cover 2½ squares. Can furnish in any size package; 1 gallon up. Only the very HIGHEST GRADE material enters into the manufacture of this paint. Write for prices.

We also carry a complete stock of Conductor Pipe and Gutter, Solders and Metals; Galvanized and Black Sheet Iron, etc.

Southern Railway Supply Company,

1323 East Main Street,

RICHMOND, VIRGINIA

CHARTERED 1870.

Merchants National Bank,

OF RICHMOND, VIRGINIA.

Capital, - - - - -	\$200,000 00.
Surplus, - - - - -	\$500,000 00.
Undivided Profits, - - - - -	\$171,000 00.

Depository of the United States, State of Virginia, City of Richmond.

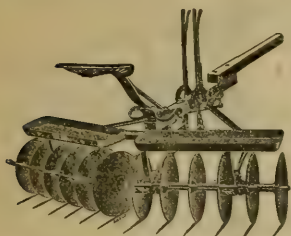
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Three Per Cent. Interest Allowed in Savings Department.

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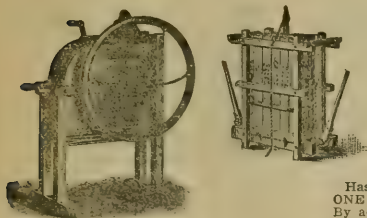
A FEW SPECIALTIES.



DISC HARROW STEEL WEIGHT BOXES.



SOLID STEEL HEAD ROLLER.



WALKING CULTIVATOR.

13 South Fifteenth Street,
Between Main and Cary.

We are sole manufacturers of the WATT, CROWN and CRESCENT Plows. Made in sixteen sizes, and with interchangeable mould boards, adapted to every variety of work. They are sold on their merits and are guaranteed to give satisfaction.

DISC HARROWS with solid steel weight boxes. MOST DURABLE BEARINGS, with oil hole directly over axle, free from dust and clogging. ANTI-FRICTION ROLLERS, ADJUSTABLE SEAT, LIGHT DRAFT. Made in fourteen sizes.

ALL STEEL LEVER HARROWS. One, two or more sections. Teeth instantly adjustable to straight or slanting without stopping team.

STEEL RIM ROLLERS with SOLID STEEL HEADS, which keep the earth from getting inside the drum, making the roller absolutely rigid. Built in seventeen sizes, with one, two or three sections.

THE MANURE SPREADER doubles the value of manure by covering two acres instead of one by hand, and will do the work of ten men with forks. THE MILLER is the lowest down spreader made, making it easy to load.

THE EMPIRE CORN PLANTER, with or without fertilizer attachment. The lightest planter made. Plants any quantity at any distance, accurately. No guess work.

DOUBLE ROW PLANTERS, with or without check rower, drill and fertilizer attachments. Adjustable in width, distance of drop and quantity.



THE UNIT ROAD MACHINE.

Has but ONE WHEEL, and requires but ONE TEAM and ONE MAN to operate it. By actual test it has been demonstrated that with four men it will build more and better road than can be done by 40 men with the usual tools. That it saves labor enough to pay for itself every two days when in use. FOR FARM WORK it has no equal for road work, cutting down ditch banks, opening drains, levelling and other purposes. THE PRICE brings it within the reach of all.

DISC CULTIVATORS. Made of steel and malleable iron. Light, strong and durable. Steel Axle, Hips, and Arch. Steel Wheels adjustable to rows of different width. Discs adjustable in width and at any angle, and to throw in or out. Convertible at a small cost into an eight disc harrow on wheels.

RIDING and WALKING CULTIVATORS. Perfectly balanced, adjustable in width. Made with four or six shovels, or with spring teeth.

FARM WAGONS. Built of best material, with full guarantee. From one horse up. LUMBER WAGONS, LOGGING TRUCKS and CARRY LOGS. BALING PRESSES for Hand, Horse or Steam Power.

GRINDING MILLS combined with HORSE POWER, all in one machine.

CORN SHELLERS for Hand or Power. GRAIN and FERTILIZER DRILLS.

FERTILIZER and PLASTER SOWERS. WEEDERS for shallow cultivation.

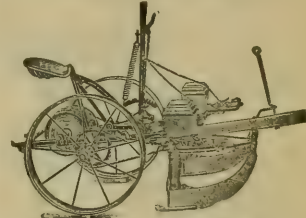
FEED CUTTERS, PEA HULLERS. THRESHERS, ENGINES, SAW MILLS, ETC. A POSTAL TO BELOW ADDRESS WILL BRING PROMPT RESPONSE.



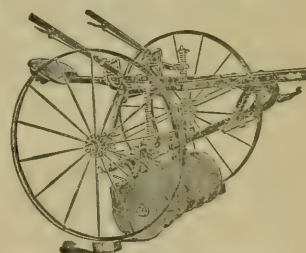
LEVER HARROW.



THE MANURE SPREADER.



DOUBLE ROW PLANTER



THE DISC CULTIVATOR.



SINGLE ROW PLANTER.

Established by
GEO. WATT, 1840.

THE CALL-WATT CO.,

MANFRED CALL, Gen'l Manager.
RICHMOND, VA.

Leading 1905 Up-to-date Labor Saving Machinery A" Grade.

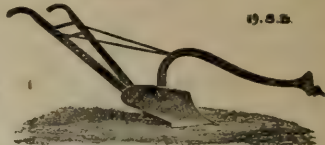


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Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saws.



Brown Steel Lever Harrows, Wood Harrows, Tiger Ball Bearing Disc Harrows, Spring Tooth Harrows, all sizes. Plain or with Levers, Acme Harrows, all sizes. Harrows of all styles kept in stock at lowest net prices.



19.5.2.



Rollers 6, 7 and 8 foot carried in stock.



Simplex Little Giant Baling Press for Farmers' own use. Has large capacity. Write for prices and catalogue.

DON'T FORGET! All the merchants in town who claim to sell Oliver Chilled Plows and Repairs only sell the Imitation, Bogus, Cheap Goods. The only place in Richmond, Va., to buy Genuine Oliver Plows and Repairs is at 1436 and 1438 E. Main street.

Repairs carried for everything we sell.



Genuine BROWN Walking and Riding Cultivator. All styles. Write for circular and prices.

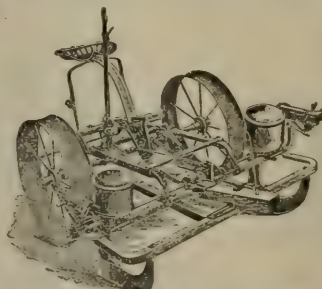


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Automatic, Accurate and Reliable. Used by thousands of practical growers the world over. Over twenty years on the market. Don't be fooled by imitations and make-shifts, but write for attractive illustrated catalogue.

Buckeye Force Pumps, Porcelain Wood Pumps, IXL Steel Wind Mills, Frick and Aultman and Taylor Engines, Saw Mills and Threshers.

Scientific Feed Grinders, all Styles and Sizes. Write for Prices and Catalogue.



Tiger Double Row Corn Planter. Plants from two and a half to five feet. Plain or with Check Row Attachment. Also furnished with Fertilizer Attachment, if wanted.



ONE AND TWO-HORSE PLANTER, PLAIN OR WITH FERTILIZER ATTACHMENT.

Smith's EUREKA Corn Planters.

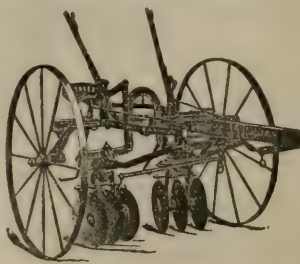
FARMER'S FRIEND Plain and Fertilizer.

Wilson Bone and Feed Mills combined. All sizes from 4 to 40 horse power.



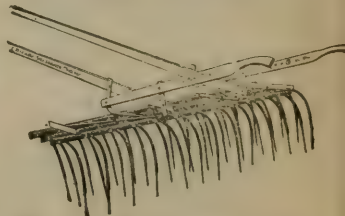
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CAHOON SEED SOWER. MICHIGAN WHEELBARROW SOWER.



BEMENT DISC CULTIVATOR, with 6 or 8 DISCS

Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day. Write for circulars and testimonials.



Hallock Fat Tooth Weeders. "Bement" Improved Duplex Tooth Weeders. Studebaker and Brown Farm Wagons, Buggies, Spring Wagons, Carts and Log Trucks. All sizes.



Kemp's Twentieth-Century Improved Manure Spreaders. Made in Three Sizes.

Write for special Catalogue and prices.

HENING & NUCKOLS, Successors to CHAS. E. HUNTER, 1436-38 E. Main St., RICHMOND, VA.

The Southern Planter.

DEVOTED TO

**PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,
TRUCKING, LIVE STOCK AND THE FIRESIDE.**

**Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.**

66th Year.

Richmond, Va., March, 1905.

No. 3.

Farm Management.

WORK FOR THE MONTH.

Since writing our article on "Work for the Month" for the February issue, the whole country has been visited by one of the severest spells of winter weather it has ever experienced. Up to this writing (February 20th) we have had a month of continuous frost, snow and sleet, and it has been impossible to do anything in the land or on the farm except feed the stock. This corresponds very much with the weather we had at the same season a year ago, except that this year we have had more snow on the ground, and the cold has extended further towards the Gulf than a year ago. This extra snow fall has been of great benefit to the fall sown crops, and will go some considerable way towards supplying the deficiency of moisture in the soil, about which we wrote a month ago. We need badly all through the South that the land should have a good soaking of rain. We have had an abnormal lack of rain for many months, and unless this be supplied before our hot weather sets in crops are bound to suffer. The melting snow will help to meet the deficiency. What the condition of the fall sown crops is going to be after the frost and snow have gone is problematical. We fear much for the wheat and winter oat crop, and for the clover and grass in the South. We had hard frost and a heavy coat of sleet on the land before the snow was deep enough to cover the crops, and this can scarcely fail not to have done serious damage. In the West and Northwest the snow has covered the ground nearly all through the winter, and probably not much harm has been done to the crop of wheat. We can ill af-

ford to see much of the winter wheat crop killed, as the area seeded was materially less than that harvested last year, from which the present small crop has come. Should this reduced area be largely winter killed and the spring be unfavorable for seeding the spring crop, nothing can save the country from a heavy deficiency in wheat, as we shall go into this crop year with no reserves worth mentioning. The fact that the wheat growing area of this country is not keeping pace with the increased requirements of the population of the country is a matter of serious menace to our continued prosperity. From being able not only to produce all the wheat needed for our own population, but a surplus so large as to make this the largest exporting country, we have gradually reached the position of lately being able barely to supply our own needs. The export of wheat and flour this year will scarcely be an item worth recording. Much of the flour exported is being made from Canadian wheat admitted into this country under a special drawback arrangement allowed by the Treasury, and thus escapes the payment of duty and comes into competition with the wheat produced by our own farmers, and thus tends to keep down the price. Whilst we are wholly opposed to the protective system, we are still more strongly opposed to a system which allows of the law being so manipulated as to help only the monopolists and injures the farmer or home producer. We believe that it will be to the interest of Southern farmers to so arrange their crop rotations this year as to permit of their seeding an increased area of wheat next fall. As far as possible let land

intended to be put into wheat in the fall grow cow peas or other leguminous crops during the summer, and thus prepare the soil for the crop and have less necessity to use commercial fertilizer upon it. Give the leguminous crops the help of plenty of acid phosphate, which will enure to the benefit of the wheat crop.

It would seem almost useless for us to lay out a programme of work to be done this month, seeing that the whole of that laid out for February still remains unattended to. What we then said as to plowing the land as soon as ever it could be done still remains good, and should be acted upon. What our crops most need to make them profitable is more perfect preparation of the soil before the crops are planted. This and not fertilizer is the secret of making heavy yields. Plow the land as deeply as can be done without bringing more than a very small quantity of the subsoil to the surface. It is too late now for this subsoil to be brought up in any quantity. This should have been done in the fall and early winter, when it would now have become grated and ameliorated so as to fit it for giving up its plant food. Instead of bringing this subsoil to the surface break it as deeply as possible with a subsoil plow or a coulter or bull tongue cultivator following in the furrow behind the plow. This will permit of the roots penetrating the ground deeply and will also form a reservoir for holding the water essential to the growth of the crop. In this issue will be found reports of several crops of corn producing heavy yields, and in each case it will be noticed that the subsoil was deeply broken to secure this result. In fact, we have never yet come across a report of a heavy yield of any crop where deep breaking of the subsoil had not been practiced. Better far to prepare one acre well and deeply than three or four times the area badly. The increased crop on the reduced area will pay much better than the smaller crop on the large area. Prof. Roberts well says in his work on "The Fertility of the Soil" that "in this country the principal causes of low yields of farm crops are *imperfect preparation of the land, poor tillage*, and hence a lack of available plant food and insufficient moisture during some portion of the plant's life." The mechanical and physical condition of the soil in which the seed is planted has more bearing upon the yield than any fertilizer that may be applied. Hundreds of farmers write us every month asking us to tell them what fertilizer to use and how much to apply to ensure a good crop. Upon the

farms of most of these men it would not matter what fertilizer they applied nor how heavy was the application, no good crop could be produced. The first necessity is deep and perfect cultivation, the next is the filling of the soil with vegetable matter, so that moisture will be held and a good physical condition be ensured. With these prerequisites satisfied then the use of some lime, say 25 bushels to the acre, would in most cases make the land capable of producing a paying crop, and with the help of plenty of manure and some acid phosphate or bone meal, and in this Southern section of cotton seed meal, would make heavy yields certain. One precaution should be borne in mind when setting to the work of plowing the land, and that is not to plow when the land is wet. Land plowed wet can never be got into good condition with one season's work; indeed, we have known land to show the bad effects of unseasonable plowing for years afterwards. Better be a few days late than lay up trouble for years to come. With such a backward season as this we know how strong is the temptation to begin work, but would urge that this be resisted until the land is really dry enough, and then to prepare a less area so much better than usual as to more than make up for any curtailment.

For the benefit of the hundreds of new subscribers who have come on our list since the February issue was sent out, we repeat the advice then given as to the crops to be seeded at once or as soon as the season will permit. The first to receive attention should be the oat crop. It is now too late to sow Virginia gray winter oats. We would, therefore, sow Rust proof or the Burt Ninety-Day oat, of which we hear good reports. Whilst we have never been in favor of sowing spring oats in the South, as they rarely make a profitable crop, yet it is sometimes almost a necessity to plant them in order to occupy land not fitted for other crops or for which time cannot be found to seed later in the season with some other crop. As a large part of the oat crop grown in the South is merely grown for cutting for hay, when the grain is in the dough state, we believe it would almost always pay better to plant a summer forage crop like cow peas and sorghum or sorghum alone later in the season than to sow oats now. However, if it is decided to sow oats they should be got in as soon as possible, and the land should be well prepared and some help be given to the crop in the way of fertilizer, unless the land be in fair condition. An application of 300 or 400 pounds of acid phosphate to the acre when preparing the land and a top dressing of 100 pounds

of nitrate of soda to the acre when the crop has commenced to grow will do much to ensure a fair growth and yield. Sow not less than two bushels of seed to the acre.

It is too late now to sow Canada peas and oats in the Tidewater and eastern section of this State or in eastern North Carolina, as the hot weather will set in before the crop can mature, and this will prevent its success, but in middle and western Virginia and North Carolina this crop can yet be sown. It is available for an early hog pasture or for green feed, and makes excellent hay. Sow the peas at the rate of one and one-half bushels to the acre, and put them down deep either with a drill or by plowing them down. Then sow the oats at the rate of three-fourths of a bushel to the acre and harrow them in. If the land is not in good order, apply 300 or 400 pounds of acid phosphate to the acre.

Grass and clover where not seeded in the fall, which is the best time, should be got in this month. It is little use seeding clover and grass unless the land is in a good state of fertility, free from weeds, and is deeply and finely broken, and the seed bed is about a perfect one. Mr. Clarke, of Connecticut, who is the most successful hay grower in this country, puts more labor on one acre of his land in preparing it for seeding than any farmer in the South would put on 20 acres in preparing it for any crop. He harrows and cross harrows, rolls and reharrows until every inch of the soil to the depth of a foot has been stirred and broken as fine as possible, and he regards this working of the soil as infinitely of more importance than the fertilizer used. He, however, uses fertilizer also liberally, and gets his return in crops of hay running up to eight tons to the acre at three cuttings in the season. This is possible here with the same care in preparation and liberal feeding. Sow the clover and grass alone without any grain crop and seed heavily, not less than two bushels of grass seed to the acre, with six or eight pounds of clover seed. Apply bone meal at the rate of 400 or 500 pounds to the acre, and if the land has not been limed during the winter it ought to have 20 or 25 bushels to the acre applied when first commencing to work it, and the bone meal or bone meal and acid phosphate be applied just previous to seeding. Harrow the seed in lightly, so as to get it all covered, and then roll if the land be dry enough. When the grass has commenced to grow freely give a top dressing of 100 to 150 pounds of nitrate of soda to the acre. For

a meadow on dry, sound land sow a mixture of orchard grass, tall meadow oat grass and red top with the clover. For low, wet land sow red top or red top and Italian rye with clover. For a pasture sow a mixture of orchard grass, tall meadow oat, red top, perennial rye, meadow fescue and Virginia blue grass, with a few pounds of red, alsike and white clover. To maintain the productiveness of meadows or pastures they should not be cut for hay more than once the first year, and then be lightly grazed in the fall with sheep or young cattle. During the fall and winter they should be heavily top dressed with farm-yard manure and in the spring after the grass has commenced to grow be top dressed with nitrate of soda, 100 pounds to the acre.

Dwarf Essex rape may be sown this month for a grazing crop for hogs, sheep and young cattle. Sow on well prepared land four pounds of seed per acre broadcast, or two to three pounds in drills two feet six inches apart. It makes the best return when seeded in drills and cultivated a few times. We have had considerable experience in the use of this crop for grazing sheep and hogs and can speak highly of it. We have also reports from farmers who have grown it, commending it strongly for hogs. It will only do well during the cool months of the spring and fall in the South. It should be eaten off by June, and the land then be sown in cow peas or some other forage crop. It may be seeded again in August after the peas come off for fall grazing.

Plant a field in artichokes for winter feed for the hogs. This crop should be planted in rows three feet apart, and about twenty inches or two feet apart in the rows. The tubers may be cut like Irish potatoes, if large. About five bushels should plant an acre. They will usually make a fair crop on land only moderately fertile, but on good land will make a yield up to 600 bushels to the acre. They make excellent hog feed during the winter—the hogs harvesting them for themselves. It is well, however, always to dig a few hundred bushels and put them in a pile or heap covered with straw or soil to feed to the hogs when the ground is too hard frozen for them to root them out. They may also be fed to cattle with advantage.

The long, hard winters we have had for the past two years should impress most forcibly on farmers the importance of making provision for growing large areas of forage crops for the stock. It will not do to

rely only on the fodder from the corn crop grown for the grain. This is the time to select and begin to prepare the land for these crops, though they need not be seeded until after the corn crop, cotton crop and tobacco have been planted. Do not overlook the necessity of selecting good land for these crops, of which two crops at least may in most cases be grown on each acre during the summer and early fall. Cow peas, cow peas and sorghum, sorghum, millet of the various kinds, soy beans, Kaffir corn and millet, milto-maize, and in sections south of James river, teocinte and velvet beans should all be provided for.

The very first opportunity should be taken to burn the land and sow the tobacco plant beds. It is already late for this work, but the weather has prevented earlier attention to it. Select a piece of warm dry, fertile land and prepare well and fertilize heavily with a good ammonia fertilizer to push on the growth of the plants. See that the beds are well drained and protected with muslin covers before the plants make their appearance. See that seed of a good variety is sown, one adapted to make the quality of tobacco which the market calls for from the particular section of the tobacco belt in which the crop is to be raised. Wherever suncured tobacco can be raised of a fine quality let attention be given to that variety, as it is always in demand at a paying price.

The early Irish potato crop should be planted as soon as ever the land is dry enough. In our last issue we gave advice as to this crop, and to that issue refer our readers.

Land for the cotton crop should be broken as soon as dry enough and be worked down to a fine seed bed as soon as practicable. The necessity for deep breaking and fine pulverization of the soil for the best growth of this crop is just as great as for the best growth of the corn crop. The necessity for early planting of the crop is emphasized by the fact that the early crop is the only one which escapes the ravages of the boll weevil. Whilst we as yet are free from this pest in the Atlantic Coast States, it is impossible to say how long this will be the case, as it is gradually working its way North. The maximum quantity of fertilizer that can be generally used with advantage on average cotton land has been concluded to be such an amount as will furnish 50 pounds of phosphoric acid, 15 pounds of potash, and 20 pounds of nitrogen to the acre. A fertilizer made up of

1,200 pounds of acid phosphate, 600 pounds cotton seed meal and 200 pounds of kainit will do this applied at the rate of 800 pounds to the acre.

CLOVER SICKNESS—CRIMSON CLOVER.

Editor Southern Planter:

If not too late, will you give us an article in the next SOUTHERN PLANTER upon the sowing of clover seed. When I commenced farming in the fifties, fields of a heavy growth of red clover were seen on every farm; now it is about thirty years since I have seen a heavy growth of clover in either Fauquier or Loudoun. October, two years ago, I sowed a field of 70 acres with German clover seed, a peck to the acre, using about half a bushel of rye to the acre to protect the clover. In November I had a magnificent stand of clover, but in the following spring there was not a sprig of it left, all being winter killed. Many of my neighbors have given up sowing red clover seed altogether. Please let me know if you have ever known the German clover sown with the red clover? and if there is any best time for sowing except that given by a wiseacre, to sow after the last frost?

R. H. DULANY.

The foregoing letter is only one of many we receive on the same subject. It is a matter of complaint from all over the country, North and South, that red clover now very frequently fails to make a stand; indeed, in some sections it has become so uncertain that the seeding of it is practically abandoned. This is a serious condition of affairs. The value of the red clover crop as an improver of the land and as green feed and as a hay crop is so great that farmers cannot afford to allow its seeding to cease, unless it is absolutely certain that by no means can its growth be ensured. This question of "clover sickness" of land has been the subject of anxious consideration for many years in the old world, where it is as common as in this country. The Experiment Stations here have many of them made investigations into the subject, but practically both in the old world and here the cause and the remedy are as yet undiscovered. The best authorities seem to incline to the opinion that an acid condition of the soil is largely responsible for the failure of the clover to stand. Like all the rest of the legumes, clover is dependent for its successful growth on the presence in the soil of the nitrogen catching bacteria, and this bacteria, like nearly all the other bacterial life on which plant growth largely depends, cannot flourish or persist in soil even slightly acid. This acid condition of the soil is largely brought about through exhaustive culti-

vation and the use of incomplete fertilizers. In experiments made at the Ohio Experiment Station the application of 1,000 pounds of lime to the acre corrected this acid condition, and the clover then made successful growth. This has also been the experience elsewhere, though not in every case. We are strongly of opinion that the use of lime would largely conduce to the growth of clover in Virginia and throughout the South generally. But there are other points which require attention as well. The practice of sowing clover and the grasses with a grain crop is one which is in our opinion largely responsible for the failure of the clover and grass to make a stand. The grain crop being more vigorous in its growth robs the young clover and grass plants of the food and moisture in the soil, and thus makes the growth weakly and tender, and then when the grain is cut off the hot sun completes the work of destruction. Sown alone on land well and deeply prepared and fertilized with a complete fertilizer following a dressing of lime applied several weeks before the manure or fertilizer, a good stand will in most cases be secured, and will persist notwithstanding the hot sun of the summer months. Another factor which we have often found operative against a successful growth of clover is the practice of sowing the clover seed on the top of hard, baked or winter beaten land in the spring amongst fall sown grain. We always practiced sowing the clover on finely worked land and covered the same with a light harrow, and then rolled it, and rarely failed of a stand. We recall a case where we had a complaint from a farmer that he could not secure a stand of clover which he was sowing on his grain fields. We advised seeding alone and covering well with a harrow and rolling. He decided to accept our advice, and directed his foreman to sow alone and harrow in. His foreman replied: You will never see any clover in that field. The year following he had one of the finest crops ever seen in that section, and has never failed since. In regard to sowing German (Crimson) clover and red clover together, we would say that we have known this practice adopted by several farmers, but it is very uncertain in results. If the crimson clover makes a heavy growth the red clover is frequently smothered out. If, however, the crimson clover makes a light growth or is much winter killed then the red clover will frequently make a crop. We have always recognized the fact that Crimson clover is a very uncertain crop, and hence have always advised sowing at short intervals and in small areas from July to October each year. In this way a stand of some of the seedings is sure to be se-

cured. We would also always sow with the clover a light seeding of wheat, oats and rye. These help the stand and ensure at least something on the land if the clover is much killed in the winter. Our experience has been that more Crimson clover is lost by hot spells of weather soon after it has germinated than is lost by winter killing. The seed is very quick to germinate, and has a heavy leaf before it has secured much root growth, hence is very apt to be killed by a week or ten days' hot sun and drouth coming just after it is sown. A large grower of the crop tells us that he almost invariably makes a better stand on land not plowed for the crop, but simply cut with the disc harrow, so as to get sufficient soil to cover the seed.—Ep.

FARM PRODUCTS NOW WASTED.

READ AT THE FIRST MEETING OF THE FARMERS' CLUB,
PORT ROYAL, VA., BY DR. C. U. GRAYATT.

Gentlemen,—When a shipbuilder sets in to repair a ship or a carpenter a house, he first examines for leaks and bad places and corrects them. Nothing would, at first sight, so impress a visitor from a European country, where agriculture has been reduced more to a science than with us, nor a prospective buyer from the more prosperous districts of this country, than the careless, untidy appearance of our farms and the waste that is permitted on them. It may be well for us, therefore, in the beginning of our work, to follow the example of the carpenter and the shipbuilder and make a survey of our premises and locate leaks and wastes. We shall probably be surprised, too, to see how many such are to be found even on a carefully conducted farm.

The word waste, as now used in this paper, must be understood to mean not properly utilized or improperly cared for, rather than absolutely lost or wantonly destroyed. It is also to be borne in mind that most of the statements and figures presented are not my own, but have been compiled from various well known authorities.

A dollar saved is a dollar made, and all that can be put to profitable use of what is now taken little or no account of will show to our credit on the year's balance sheet.

The first subject to which your attention is called is barn-yard manure. It is astonishing to learn that as late as five years ago this was regarded as a nuisance in some parts of the Middle States, and summarily disposed of by dumping in creeks, throwing it in roads, or in some out-of-the-way spot, where it was allowed to accumulate. In other cases it was burnt. There may be grim satisfaction in this for us, as we have never been quite so bad, but that our

negligent manner of treating this product leads to constant and heavy loss, both pecuniarily and in land fertility, admits of no doubt. For a number of years the true fertilizing value and the best and most economical method of handling farm-yard manure have claimed much attention, not only by the Department of Agriculture and State Experiment Stations, but by the foremost agricultural scientists of the world. Current literature also has dwelt extensively on the subject, endeavoring to impress its importance upon farmers, and none has been more urgent in this than the admirably conducted *SOUTHERN PLANTER*.

Modern research teaches that there are many questions relating to this product which have not been clearly understood. For instance, it was observed that manure neglected and left in open yards lost much of its fertilizing quality, yet notwithstanding such loss, it still acted beneficially and for a length of time when applied to the land. How this was done was not clear until explained by the microscope.

In point of fact such manure has lost the greatest part of its fertilizing elements by the leaching of its soluble salts and the loss of its nitrogen by fermentation, still the mechanical and physical improvement it makes in the land renders it valuable. Its chief worth, however, depends upon the presence of bacteria, which it holds in great numbers. These are of two kinds, one operating near the surface because they can only work in the presence of air, aerobes, and the other, anaerobes, living where there is little or no air are found in the interior and at the bottom of the heap. These infinitesimal organisms upon being conveyed to the land keep up their activity and by breaking up the complex constituents of the soil render them available for plant food. This activity is maintained for a long time—years—and explains the enduring benefit of manure as compared with that of commercial fertilizers, which ceases so soon as its constituent elements are appropriated by the growing crops, and is therefore transient.

The *SOUTHERN PLANTER* says in this connection: "Every one who has been observant will have noticed that a piece of land to which even a very slight coating of farm-yard manure has been applied will show the effect for a number of years, much longer than would a similar piece of land to which a much larger application of plant food in the form of commercial fertilizer had been made. This is the result of the microbe action in the soil induced by the farm-yard manure and not of the plant food in the manure." Quoting from the same authority: "When taxed with the folly of spending, as Southern farmers are now doing in the three States of Virginia, North and South Carolina, something around \$15,000,000 every year for commercial fertilizers, and, at the same time, largely wasting all the farm-yard manure, their reply usually is that the amount of farm-yard manure

which can be saved every year is such a small matter that it is not worth consideration. * * That this is wholly untrue is easily demonstrable. Careful experiments have shown that each horse makes manure in the year of the value of \$27, each head of cattle \$19, each hog \$12, and each sheep \$2. This estimate is based on the values of phosphoric acid, potash and nitrogen in commercial fertilizers, and is, perhaps, too high from a practical standpoint. On the other hand, however, no figure is, in this estimate, placed on the value of farm-yard manure as an improver of the soil by reason of the vegetable matter it puts in the land, and this has been conservatively estimated from practical observation as being equally as great as the direct manurial value; nor, again, is any figure in this estimate placed on the value of manure as the direct inoculator of the soil with the life-giving bacteria upon which largely depends the crop producing capacity of the land. This feature alone is in our estimation of infinitely greater value than both the others put together. * * It may safely be taken as a conservative estimate that on each farm carrying four horses, twenty cows, fifty sheep, and ten pigs, the manure produced in a year is of the value of \$250. How few farmers spend as much as \$250 every year in the purchase of standard commercial fertilizers, and yet they annually waste this sum and more in proportion to the stock kept by neglecting the manure heap, saving at the spigot and spending at the bung with a vengeance, and then they say farming does not pay."

Sir John Lawes, the father of agricultural experimentation, and one of the highest authorities in the world on this subject, said that as a result of his experiments continued for forty years, he was able to say that on land manured continuously for twenty years there was a gradual accumulation and increase of produce, and then for twenty years after the application of manure ceased on one particular plot of land the annual yield was considerably higher than on unmanured land.

Every farmer can secure this constant improvement of his land if he will only give attention to the saving of manure on his land. If you have only manure sufficient for a light coating use it. Save and utilize every bit.

A writer in the *Rural New Yorker* says he "hopes the time will soon come when the farmers of our country will look upon the manure pile as one of the principal resources of the farm; when it will, in great measure, be considered a guide to the productive capacity of the farm." The manure pile, a by-product of the farm, is in his judgment one of the greatest sources of revenue.

The Department of Agriculture supplements this by saying that a well-kept manure heap may be taken

as one of the surest indications of thrift and success in farming.

From the following table each farmer can determine for himself the amount and value of the manure he should save, according to the stock he carries, calculations based on 1,000 pounds live weight:

	AMOUNT.		ANALYSIS.			VALUE.	
	Daily. lbs.	Annual.	Nitrogen. per ct.	Phosph. Acid. per ct.	Potash. per ct.	Daily. Cts.	Yearly.
Horse	48.8	17,376	0.49	0.26	0.48	7.6	\$27 74
Cow	74.1	26,380	0.43	0.29	0.44	8.0	29 23
Hog	8.4	2,990	0.84	0.39	0.32	1.7	6 08
Sheep	4.0	1,424	0.78	0.39	0.50	7.2	7 08
Hen.	0.25	89	2.8	1.8	0.8		64

A study of this table shows that on a farm carrying four horses, ten cows, fifty sheep, and ten hogs, as referred to the aggregate value of the manure, if all could be saved and utilized, would reach the astonishing sum of \$814.46. Now, allowing one-half as deposited during work or while in pasture, \$407.23 worth could be collected with suitable housing for the animals. Hence the estimate of \$250, the one given by Prof. Roberts, representing the value of what should be saved is not an exaggeration, and it still leaves out of account the microbic and mechanical benefit derived from the manure.

Another much neglected product closely allied to the foregoing, but not usually considered with it, is poultry manure. Counting night dropping alone, a hen gives 45 pounds a year, containing, when fresh, 2.8 per cent. nitrogen, 1.8 per cent. phosphoric acid, and 0.8 per cent. potash; fifty hens, therefore, will make 2,250 pounds in a year, or more than a ton, of the most highly nitrogenous fertilizer on the farm, the commercial value of which, if properly cared for, would be \$12.35. It quickly loses its nitrogen, however, and deteriorates if not mixed with suitable absorbents or preservatives. Ashes, which are frequently used for this purpose, really help to liberate the nitrogen, and are therefore destructive rather than beneficial, whereas dry sand, woods earth, leaf mould, acid phosphate and kainit all prevent loss of nitrogen, and the addition of sawdust assists not only by its absorbent quality, but improves the mechanical condition.

A mixture of 30 pounds poultry manure, 10 pounds sawdust, 16 pounds acid phosphate, and 8 pounds kainit would carry 1.25 per cent. nitrogen, 4.5 per cent. phosphoric acid, and 4.5 per cent. potash. The 2,250 pounds of manure so treated would make a compound of 4,765 pounds, or two and one-third tons—having a market value of more than \$25.

Is hen manure worth saving?

We will now briefly consider the methods recommended for taking care of farm-yard manure.

It is becoming more and more the custom to haul it out as made, or every few days, and apply it at once to the land, not leaving it in heaps to leach, but

spreading it as the best means to insure against loss and to gain the greatest amount of good. Since the land cannot always be available, however, and other circumstances may prevent frequent hauling, provision must be made for preserving what must be left about the barns.

I find that the question of building special sheds for storage is a disputed one among the authorities; some assert it does not pay, others that it pays over and over again. All agree, however, that the manure should be compacted in order to lessen fermentation, and the consequent loss of ammonia. This cannot be more simply done than by leaving it in the stalls to be packed by the animals, providing them at the same time with sufficient bedding for cleanliness and absorption.

In any case as the liquid excrement is much richer than the solid, representing, as it does, nearly all of the nitrogen and potash, it is necessary to use absorbents. The most available we have in quantity is straw, but as this is in itself very poor in fertilizing elements, it should not be used in excess. One-third of the weight of dry food consumed seems to be the rule governing the amount of litter required. For a horse this would be six pounds, and for a cow nine pounds, a day for bedding. Forest leaves, when procurable, make a more desirable absorbent. Kainit, land plaster and acid phosphate are recommended, but if used in stalls the application should be made under the bedding in order to protect the animal's feet. One of the best ways to secure moderate and uniform fermentation is to intimately mix the manure of horses with that of cows and hogs. The latter keep the heap moist and check too rapid fermentation or "fire-fanging."

It is interesting to note that in the construction of nearly all modern stables the matter of manure preservation is kept prominently in view, and concrete is used both in stalls and yards to control loss by leaching. Numerous reports from those who have adopted this plan indicate that it is the most efficient and, on the whole, the most economical method.

(TO BE CONTINUED.)

A CORN GROWING EXPERIMENT IN NORTH CAROLINA.

Editor Southern Planter:

I notice in your paper that you ask for a report of yields of corn from the Southern farmer. In complying with your request, will give a report of an experiment made by myself in 1904 on my farm, lying in the western part of Forsyth county, N. C.

I selected a plot of bottom land, which had been sown in peas the year previous. I cut the vines for

hay, the pea stubble remaining undisturbed until spring. About May 1st I gave the land a top dressing of stable manure, and then broke the land with a two-horse turning plow, following this with subsoil plow, breaking to a depth of about twenty inches. Then with disc and Syracuse smoothing harrows I harrowed and reharrowed until I had thoroughly pulverized the soil. This being done, I used 200 pounds kaint, thoroughly mixing same with 1,000 pounds Baugh's bone and potash, sowing it broadcast with wheat drill.

After this was done I was ready to plant. I ran rows two and one-half and five feet alternately, the object being to let more light and sun into the corn. The variety of corn planted was T. W. Wood and Sons' Eureka corn, dropping it with corn drill, putting the grains seven inches apart. When I was sure of a stand I pulled out every other stalk, leaving it an average of about 14 inches apart in the row. I cultivated shallow, using only a small four-hoe cultivator.

Now for results. The County Fair Association of Forsyth county offered a premium, donated by Geo. E. Nissen & Co., one Nissen two-horse wagon to the person making the greatest yield of corn per acre. In consideration of this proposition, I made the experiment stated. I gathered 95 bushels and 33 lbs. from an acre, accurately surveyed by the County Surveyor, and the corn weighed by the secretary of the Fair Association, and won the wagon. In addition to the above yield, I gathered 725 bushels from 12 acres (60½ bushels per acre).

I have given you some idea as to what this county has done, and can do in producing corn, and will say it can produce wheat, too. I harvested 33 acres of wheat in 1904 that yielded 777 bushels, an average of 23 1-2 bushels per acre, and on 10 acres of the 33 I got a yield of 31 bushels per acre.

Mr. Editor, since becoming a reader of the SOUTHERN PLANTER, I have become thoroughly convinced that my land needs lime, but at the price it has been quoted me it seems too expensive. The price made me is \$1 per barrel. If I could buy it at \$4 or \$5 per ton I think I would use some as an experiment any way. If you can tell me where and from whom I can get the lime at a price I can afford I will be greatly obliged. Please answer through your paper.

I close with many good wishes and sincere thanks to the PLANTER for the information received through its columns.

J. W. SPEARS

Forsyth Co., N. C.

In this issue will be found an advertisement from

a Norfolk firm offering lime at a reasonable rate for agricultural purposes. One dollar per barrel is too high a price to pay for lime for agricultural purposes.—Ed.

ANOTHER SOUTHERN BENEFACTOR.

Editor Southern Planter:

Mr. Sandy, having successfully demonstrated that a run down Southside Virginia plantation can be reclaimed and made to produce abundantly in connection with stock raising and dairying, certainly deserves the thanks of all interested in agriculture, and too much praise cannot be bestowed. In this connection it is a pleasure to note that there are now many splendidly equipped and managed farms throughout the new Southland, and the tendency everywhere seems to be upward and towards modern methods. The writer recently had the pleasure of visiting the model stock farm of Mr. Louis de Lacroix, of Granville county, N. C. His estate lies just outside the limits of the pretty little city of Oxford. When Mr. de Lacroix took charge of this place, about ten years ago, the land was very poor. But his experience on a New England dairy farm had taught him the value of the manure heap. Those tired old fields had to be revived and restored to productiveness, and stock raising and feeding seemed to be the only equation in the solution of the problem. Thus wisely laying the foundation for permanent improvement, with the exercise of brains and skillful hands, a complete transformation has come over the whole place. About two hundred head of cattle are being fed this winter at the barn. During the day the animals are permitted to exercise in small fields near by. Quite a number of thoroughbred Herefords are in this herd. Dorset sheep are raised here, with Duroc-Jersey and Essex pigs, while fifteen brood mares are kept to raise mule colts, and this is by no means the smallest part of the business. All the grain, hay and forage of every description raised on the farm is fed to animals, and all the manure is carefully saved and hauled on to the fields and spread as fast as it accumulates. Mr. de Lacroix has an eye to forestry, also, and the woodlands on his place are a thing of beauty. The underbrush is taken out, ugly and unsightly trees are removed when needed for fuel, shade trees adorn the drives and roadways, and, with grass fields on every hand, the farm altogether presents much the appearance of a well-kept park. People who travel tell of beautiful countries afar, and the thought is here suggested that, natu-

rally, we have in the South a very pretty country, full of resources and capable of the highest state of development, and the pity is that the opportunity to beautify and develop Southern farms is so much neglected, and even abused by the thoughtless and destructive. Along with the paramount question of good country roads, now agitating the minds of the people of Virginia and other Southern States, the preservation of the beautiful forests and how to reclaim and enrich the already cleared but unproductive lands of the South, are questions of equally vital importance.

JORDAN B. WELLS

Mecklenburg Co., Va.

IMPORTANCE OF WELL BRED SEED CORN.

Editor Southern Planter:

I am giving special attention to the improving of corn for seed purposes, and have gathered some very interesting facts on the subject. Careful examination has shown that a larger per cent. of the stalks of corn as now grown bear no ears, and that the ten year average corn yield for the whole country is only about 25 bushels per acre. In Virginia the average yield for the ten year period is 19 bushels. With pure bred seed there will be at least an ear on every stalk. Planted in the usual way in hills, it has been found that a yield of about 100 bushels per acre would be possible on good corn soil. Thus the difference between 25 bushels and 100 bushels of corn per acre lies largely in the quality of the seed corn. As remarkable as this seems, the facts seem to justify this statement. I planted last year 30 acres with well bred seed corn. This gave an increased yield per acre of 25 bushels over that planted with ordinary seed corn. I planted White Dent corn on river bottom land. The yield was 150 bushels per acre. I hope to increase this to 200 bushels per acre this year. These facts are very suggestive to all farmers, and point to the importance of obtaining the best pure bred seed corn possible. The best plan for saving seed is to go through the field before the crop is harvested and gather the best ears from the best stalks. The largest yields of grain are usually made from varieties producing two ears on each stalk, and if such a variety is desired then seed should be saved only from stalks bearing two ears. Thorough cultivation is needed, but that does not mean deep cultivation. The deepening and loosening of the lower soil should be done before the corn is planted, and the shallower the later cultivations can be done the more satisfactory will be the results. Corn has a

large number of long roots distributed through the upper soil, and whenever the soil is cultivated so deep as to disturb any of the roots the plant is necessarily weakened by having its supply of moisture and nourishment decreased. The cutting off of so many of the corn roots as is done by cultivating four or five inches deep gives the plants a check, from which they never fully recover. Cultivation should begin immediately after the first rain that follows the planting.

C. J. JOHNSON.

Sevier Co., Tenn.

CORN YIELD FROM PURE BRED SEED.

Editor Southern Planter:

In your January PLANTER you asked for reports of best yields of corn.

Last spring we bought from the Secretary of the Illinois Corn Breeders' Association two bushels of pure bred Boone county White Seed Corn. Although the crop was not worked as perfectly as it should have been and owing to the drought, in the latter part of its growth, the yield was somewhat decreased, yet notwithstanding these drawbacks our best acre yielded 75 bushels of shelled corn. This is not the average yield of a field, but of a measured acre taken from what we thought to be the best part of the field. The average yield of the field, I am sure, was somewhat less than that, but much better than the same field has yielded before. PEEB WILMER & SON.

Charles Co., Md.

CORN YIELD—MAKING HOME SUPPLIES.

Editor Southern Planter:

In 1904 I had 24 acres in corn, and made an average of eight barrels (forty bushels) of very fine sound corn per acre. Nearly eight acres of the 24 was branch bottoms, and we could not work that as I wanted to, because it was too wet when it ought to have been worked. I want to put in five acres in peas for hay this spring (cow peas), and wish to sow something else with them to hold them up. What do you think is best for that purpose, and at same time add to the feeding value of the hay? I have been trying to grow all the feed we need for cattle and horses on the farm for years, but find that we want something that is better than corn fodder or common grass hay for milk cows and young cattle. Clover hay is good, but we cannot grow that every year, and we must have a substitute for it. I cannot afford to buy mill feed at present prices to feed

my stock without throwing away money. There is but one way to get out of the hole, and that is we must do our best to raise everything we need to eat ourselves and to feed our stock on our farms. Can this be done? Yes, I think so. How? By carefully studying our needs. Then selecting such crops as we know will grow on our land. Make a thorough preparation of the soil and plant or sow in good time, then give the crops close attention. Some crops may fail on account of unfavorable weather, but I have never seen a season that was not good for some one or more crops every year. If an early crop is a failure, put in a late one of some kind to help out. On good land with hard work and close attention to every detail, any intelligent farmer can make a good living, keep out of debt and save something for old age.

W. A. MARSHALL.

Albemarle Co., Va.

EXPERIENCE WITH BERMUDA GRASS, BURR CLOVER AND RESCUE GRASS AS A PERMANENT PASTURE.

Editor Southern Planter:

In the February *PLANTER* Mr. H. B. Arbuckle has an article on Bermuda and Burr clover as a permanent pasture, and calls for experience of others with these crops. My ten years sojourn in Texas and experience there along this line may be of some interest. I had a pasture lot consisting of about three acres, upon which I grazed one cow and a horse twelve months in the year, but during two months of winter and in the late fall, when a severe drouth came I had to feed some. However, half the land was not well set, but the amount of food furnished without any cost was enormous. The horse ate the clover fairly well when young, and the cow was fond of it.

If we had fall rains the rescue grass and the burr clover would come up during December and January, and frequently would afford fine pasturage in February. The rescue and burr clover would seed and die by middle of May, when the Bermuda would be coming on nicely, and last all summer if the weather was not too dry. For milk and butter and also for fattening stock, I know of no pasture grass or forage crop that will surpass a good Bermuda sod. To kill it out, however, is almost out of the question, except during severe drouths, when constant cultivation may be used to advantage. Trying to kill it out has given me many painful backaches.

It will injure fruit trees very much, and should

never be allowed in an orchard. I have made beautiful lawns with it during a single season. It is a warm, sunny plant. Severe cold weather kills all the tops. In the Southern and Eastern parts of Virginia it may grow well.

Burr clover always reseeded itself; also rescue grass. Now, since we have learned that burr clover bacteria will live on alfalfa roots, this makes the growing of this clover much more important. It may be an excellent plan to grow a crop of burr clover on land first before sowing alfalfa seed, but I have had no experience with this clover as far north as Virginia.

Another point I should add about it is that while it gives a beautiful golden yellow color to butter, the flavor is made rather undesirable. I think the seed should be sown in the late spring this far north. While, as Mr. Arbuckle states, the seed germinates at a low temperature, still I have seen much of the crop killed by sudden freezes in February.

The rescue grass seed could be sown the same time as the clover. An excellent way to make a Bermuda sod is to prepare the land thoroughly and lay it off in rows two feet apart across the field and plant small pieces of sod two feet apart in the rows. Press the pieces down into the ground well with the foot, and then cover with some dirt. This can be done in this climate from May till August. Some times the seed is sown, but it is very costly, averaging from 75 cents to \$1.50 per pound. This grass rarely if ever seeds in this country, therefore all seed is imported. I am informed that some of it is old and unreliable.

Perhaps Burr clover is the most important one of the three for this State, further South in the Gulf States especially. Bermuda is about the only good lawn grass we have, and is the best permanent pasture grass.

R. H. PRICE.

Montgomery Co., Va.

SOY BEANS DO NOT IMPROVE THE SOIL.

The Southern Planter:

In the last issue of the *PLANTER*, on page 99, in answering a question as to the improvement of the soil, the Editor asserts that "both cow peas and soy beans are improvers of land." Now, Mr. Editor, you are sustained in this opinion by all agricultural writers, and all the scientific professors of our Experimental Colleges. Notwithstanding all this strong support on that side of the question, I am thoroughly convinced that soy beans do not improve the soil, but tend to exhaust it considerably. My opinion is so

strong that I think it a question of sufficient importance to give actual practical results, which have so convinced me, even against scientific investigation of the subject.

A neighbor had a field of cow peas, in the middle of this field there were several acres of soy beans. That fall the whole field was seeded in wheat. The following spring you could see (standing in his yard a mile off) the exact land where the soy beans grew, from the bare and poor growth of wheat. The yield of grain was correspondingly poor on that land. That farmer was so convinced that he never planted any more soy beans.

Another neighbor had an eighty acre field in peas and twenty acres alongside in soy beans. Both crops cut off. The following season in riding by the dividing line could distinctly be seen to the very furrow. The writer had thirty acres of cow peas and twenty acres of soy beans in the same field, both crops were grazed off by cattle, then seeded to wheat, and where the beans grew the crop did not compare with the wheat after cow peas. None of us ever use soy beans with any expectation of improvement of the soil. There is no trouble about making a fine growth of plant and beans, and the roots are full of nodules. But in this section soy beans do not improve our soils. Cow peas and all the clovers act with the greatest benefit on our soils. JULIAN M. RUFFIN.

Hanover Co., Va.

The only explanation we can give of this seeming failure of a nitrogen gathering plant to improve the land is that the soy bean crop must be a greater consumer of phosphoric acid and potash than the cow pea and the clovers. It is a strong growing crop, making a very heavy yield of grain, and thus calls for a larger supply of phosphoric acid and potash. Wherever these mineral fertilizers are not supplied to the leguminous crops they will eventually fail to improve the land or even to make a good growth themselves. We cannot doubt but that with heavy fertilization with acid phosphate and (possibly potash in some sections), soy beans will be an improving crop.—Ed.

SOME FARM EXPERIENCES.

Editor Southern Planter:

Two or three years ago I called at your office to get your advice in regard to a mare that was very much subject to colic. She is a very ravenous eater and drinker, and the treatment you advised, aconite and nux vomica, did always cure the colic, but since I have kept drinking water in the stable before the horses, I haven't had a horse suffering with that dreaded disease. Besides, I learned that I (and

many other farmers) don't treat our horses, our truest friends, right, when we only give them water when they come in from the field at night, and no more of it until they are brought out again the next morning; just give them enough to eat of corn, hay or other roughage, and we think we have done our duty.

My rule is now that every horse's bucket is filled with water, after they have drank all they want at the well or spring. By 9 o'clock, when I give them their night feed, I always find the buckets empty, and I refill them, to find them empty again next morning, when I bring another supply. This makes three buckets of water my horses drink during the night, while others suffer for it. Too much trouble, some farmers will say. They will, however, take care to have their own thirst quenched in the hot summer nights. I don't think the trouble too much if spring or well is anywise handy, as it ought to be, and if I can by this treatment add to the comfort of my horses or may even prevent a case of colic.

Another thing I learned in 1904 is the advantage of owning a grain drill. I was drilling some peas with acid phosphate; after finishing half the land, some part of the guano attachment broke (it was my fault), so I finished drilling the peas and sowed the phosphate by hand and harrowed it in, and what was the result? The first part made a fine crop of pea hay, full of pods, and ten days earlier ripe than the last part, which made smaller pea vines, hardly any pods, but was full of crab grass, while on the first plot there was none. The acid phosphate sowed by hand didn't benefit the peas any, but made the crab grass grow.

I also learned that for work which is exposed to the weather, like fencing, the old-fashioned cut nail will outlast a wire nail, the latter will rust off quicker between post and plank.

With great interest I read in the January copy of your valuable journal what Mr. B. F. Wright advised as to handling heavy corn stalks. His plan to cut them up with a disc harrow and plow them under is no doubt all right where the corn is to be followed by a spring crop, but where wheat is to be sown in the corn land I think the deep plowing and covering of so much stalk and grass would make the land too porous for wheat, unless perhaps where by heavy rains or heavy rolling the soil is compacted and the drilling of the wheat delayed till late in the season. I don't think, though, that there really is much humus to be obtained from the dry cornstalks, therefore I have them cut off, raked in rows with a hay rake and burnt. Years ago I hauled a big pile of stalks, say six or seven loads, from some low grounds out to the edge. After they were rotted down, I could have carried the whole pile in a wheelbarrow, and it never

improved even the spot that had been covered with it, neither did I ever notice an improvement in the wheat or oats where the stalks had been burnt in rows or piles. This is my experience.

Lunenburg Co., Va.

CHR. RICKERS.

We have always advised that when only a light dressing of commercial fertilizer is applied, say not more than 200 or 300 pounds to the acre, that it should be applied in the drill and not be broadcast, care always being taken not to allow the caustic mineral fertilizers to come into contact directly with the seed. Where more than this quantity is applied, then sow broadcast. Peas always make a better crop drilled than sown broadcast, as the seed is better covered than is possible with a harrow. If sown broadcast they should always be worked in with a cultivator or disc harrow. The proper place for corn stalks is in the fodder mow shredded with the blades and shucks. It then goes to the manure pile in a shape readily available for plant food.—Ed.

CORN YIELD.

Editor Southern Planter:

Seeing from your last PLANTER that you would like Virginia farmers to report their yield of corn for the past year, I take pleasure in submitting mine, which I consider very good.

I tried Dr. Fisher's (of Emmerton, Richmond county, Va.) method, of which he gave full details in last April PLANTER.

From four acres of my best land I housed nine and a half barrels (457½ bushels) of corn, a little over eighteen barrels per acre (90 bushels). For the sake of your new subscribers who did not see Dr. Fisher's article, I will say that his corn was planted three and a half feet between rows and twelve inches in row.

If any reader of your paper would like to know how this land was prepared and cultivated, I would be glad to answer any question on the subject.

W. GRAY BROCKENBROUGH.

Richmond Co., Va.

In sending this report, Mr. Brockenbrough says he believes that by this method he can grow double the quantity of corn per acre over any other.

For the benefit of those of our subscribers who have not a copy of the last April issue of the PLANTER we append Dr. Fisher's article describing his method of corn production.—Ed.

Dr. Fisher, of Emmerton (Richmond, county, Va.) who grew over 95 bushels of corn to the acre

last year, sends the following particulars as to how he prepared and worked his land to secure this result. Before describing the method it may be well to give some history of the previous cropping of the land, as this in our opinion has a large bearing on the subject. Prior to 1901 the 3½ acres on which he grew the crop, and which made 335 bushels of corn, had been producing peas, followed by crimson clover, the clover always grazed or cut off in the spring in time for tomatoes. All the land was limed about 1898. In 1901, after a crop of clover, the land was seeded to peas and corn, three pecks of peas and one peck of field corn, put in on the 25th June, with a disc drill. The corn grew from five to eight feet tall, heavily loaded with vines. This was cut when the corn ears were in the milk state. These ears were pulled off and hauled to the hogs when the crop had been drying about two days. Getting these ears off opened up and helped to dry the crop. It made 27 large two-horse wagon loads. The land was then seeded to crimson clover that was cut in the spring of 1902. The land was then put in tomatoes. The last working of these tomatoes was followed by seeding crimson clover. This clover was grazed all fall and winter and a cutting for hogs was made in May, 1903. Then followed the corn crop in question, the growing of which is thus described by the Doctor:

The yield of corn per acre in this locality is very small on an average and was particularly so last season. There is little or no really rich land in my immediate neighborhood. Our corn crops are generally shortened, and sometimes ruined by drouth. I cultivate very little land, but study to overcome the above troubles. I followed my land deep, with turning plow, *subsoiling* each furrow. I pulverized with the harrow and applied 300 pounds of 10 and 2 fertilizer per acre through a wheat drill. The corn rows were opened 3 feet 6 inches apart, with turning plow (a No. X Dixie) twice to each row and in the bottom of which was run the subsoiler. The corn was planted behind the subsoiler, in this loose bed. Used a planter run shallow, dropping about 14 inches apart. As soon as the corn was a few inches tall, a cultivator worked the middles, putting a little dirt each time down in the furrow and around corn. During the dry weather a dust mulch was used after cultivator. I never found moisture to fail to come within one and one-half inches of the surface. By the last running of the cultivator the furrows were filled and the whole surface was perfectly level. I will say here that I feel convinced that my yield would have more than reached 100 bushels per acre, but for the fact

that the drill clogged at times and there were many spaces left from 20 inches to 30 inches. These were replanted, but to no purpose, as the growing corn soon smothered out the replanted. The device I used for subsoiling is the best I have seen. It is not original with me, as I got the idea from Mr. Jos. Pierce, of Lancaster county. Take an iron frame cultivator and take off all the shanks except the hind one (on middle bar) and righthand one. Either take off the left wing or shut it up close to the middle. Mount the two shanks with long stout steel hoes two inches wide. Put gauge wheel in front of this machine, turned so as to run wheel well ahead. Now with the two hoes just opened enough to tear up the whole width of the furrow made by the turning plow, and one good horse hitched, you can do the work well. If the shanks are set right the hoes will draw down in the hardest soil; so that the driver will have to carry some weight in his hands to keep the depth uniform. The dust mulch can be made easily by taking two sled runners, the under side being boarded with thin boards, lap jointed. Put first board on behind, and you get the laps made so as to make a thorough pulverizer. Now nail a strip one inch by one inch across these boards down the middle, slightly narrow the top edge (top when it is turned over to put bottom on). This keeps it straight after the horse. A boy can ride on it and drive. Width must be made to suit space between corn rows.

COCKE'S PROLIFIC CORN IN NORTH CAROLINA.

Editor Southern Planter:

Having seen some discussion in agricultural papers as to the merits of Cocke's Prolific Corn, I decided to try a small lot of it.

I plowed a piece of pea stubble early last spring with two-horse plow, plowing very deep, and following with a one-horse plow in furrows and loosening the subsoil several inches. Previous to plowing the land a liberal coat of manure was spread broadcast over the land. When ready to plant the land was double cut several times with disc harrow and put in fine condition. Rows were laid off three and a half feet apart, and corn put in with Planter, using 100 pounds of cotton seed meal and acid phosphate, well mixed together. Corn was cultivated in the usual way. The crop was gathered and the piece of land (one-half acre) made sixty bushels of good, solid corn. The land previous to this crop produced about fifteen bushels of wheat. It averaged three good sized ears of corn to the stalk. I have a piece of bottom land (six acres) that has produced an average

crop every year for twelve years without any fertilizer or manure of between fifty and sixty bushels to the acre.

SUBSCRIBER.

Davidson Co., N. C.

SORGHUM AND PEAS.

Editor Southern Planter:

For the last two years I have been sowing half a bushel of sorghum and one bushel of peas per acre, using the sorghum instead of millet, and find result highly satisfactory both as to quantity and quality of hay. Now, what I wish to know is, do I get the same result from my peas in sowing sorghum as in millet? I notice the sorghum smothers out a good many peas. My objection to sowing millet with peas is that the millet matures and has to be cut long before the peas have fully matured. Will you kindly give me your advice on this matter.

I read with much interest and heartily endorse every word your correspondent from Virginia Experiment Station said in regard to the value of sorghum hay. The last issue of the SOUTHERN PLANTER is worth more than the cost of a year's subscription.

E. A. GRAHAM

Roanoke Co., Va.

We have always advised sorghum as preferable to millet for seeding with peas for the reason stated above. If less sorghum seed is used the peas will not suffer from smothering.—Ed.

COW PEAS.

Editor Southern Planter:

According to the census of 1900, there was in 1899 a total acreage of 771,018 acres devoted to cow peas in the twelve states of Georgia, South Carolina, Alabama, North Carolina, Tennessee, Mississippi, Texas, Arkansas, Virginia, Florida, Louisiana and Kentucky, with a total yield of 6,131,600 bushels. Georgia has the largest acreage—167,032 acres, yielding 1,130,441 bushels. The acreage then decreases in the order named until we reach Kentucky, which has only 8,304 acres. The average yield in all the states is a little over 8 bushels per acre.

North Carolina, Texas, Virginia and Kentucky produce each over 9½ bushels per acre. Louisiana produces over 9½ bushels per acre. North Carolina exceeds all in yield per acre. Georgia with the largest acreage, comes out behind, yielding a little over 6½ bushels per acre.

The yield in all said states is much lower than should be. Under favorable conditions from 30 to 50 bushels per acre can easily be grown.

FORMULA FOR SPRAY MIXTURES.

COPPER SULFATE SOLUTION.

Copper Sulfate (Bluestone) 1 pound
Water 15 gallons

Dissolve the copper sulfate in a bucket of hot water, as it dissolves more quickly in hot water; and dilute to the desired quantity. *Use wooden or earthen vessels for copper sulfate solution.* This solution is to be used on dormant plants, before the leaves have expanded.

BORDEAUX MIXTURE.

Copper Sulfate 4 pounds
Unslaked Lime 6 pounds
Water 40 gallons

Dissolve the copper sulfate as mentioned above, slake the lime in a bucket of water and dilute with several gallons of water and strain through a coarse cloth to free the mixture of the small lumps. They interfere with the free flow of the mixture through the spray nozzles. Mix the two solutions together and add water to make 40 gallons. Use this for rots, molds, mildews and all fungus diseases. For potato blight add two pounds more of copper sulfate.

A combined fungicide and insecticide for biting insects may be made by adding 4 ounces of either Paris Green or London Purple to the above.

AMMONIACAL COPPER CARBONATE SOLUTION.

Copper Carbonate 6 ounces
Ammonia About 3 pints
Water 50 gallons

Dissolve the copper carbonate in ammonia in a closed wooden or earthen vessel and add to it the required quantity of water when ready to apply. As ammonia varies in strength, some care is necessary to use no more than is needed to dissolve the copper carbonate. This preparation is used for the same purpose as Bordeaux, but is intended to be used only when fruit is nearly grown, as Bordeaux sometimes affects the skin of ripening fruit.

KEROSENE EMULSION.

Hard Soap 1 pound
Boiling Water 1 gallon
Kerosene 2 gallons

Use "soft water" (preferably cistern water.) Dissolve the soap in the boiling water; add the kerosene and churn violently until the mixture becomes like buttermilk—not less than five or ten minutes. Dilute with water ten to fifteen times before using.

For sucking insects.—For scale insects use strong emulsion. For plant lice, mealy bugs, red spider,

etc., the weaker solution may be used. Soft bodied insects like the cabbage worm may be destroyed with this solution.

Special machines are now on the market that mix the water and kerosene directly, and at most any proportion desired, and are recommended wherever scale insects are to be destroyed. When buds are dormant use a mixture of kerosene one part, water three parts.

LIME, SULPHUR AND SALT MIXTURE.

Lime, 30 pounds (unslaked), Sulphur (flowers) 30 pounds, salt 10 pounds, water 100 gallons. Put four or five gallons of hot water in an iron kettle (20 gallons capacity), add 15 pounds lime. Stir with wooden paddle so as to spread it about, then as soon as in full boiling from slaking add 15 pounds sulphur and mix briskly with lime, adding boiling water as needed to bring the whole mass into a thick paste. then add water enough to make 10 or 12 gallons and boil from 30 to 40 minutes. Add the salt when the paste is diluted. When the wash is cooked strain and dilute to 100 gallons.

PARIS GREEN.

Paris Green 1 pound
Water 175 to 200 gallons

When this mixture is used by itself add one pound of quick lime to prevent it injuring the foliage. See under Bordeaux mixture.

Paris Green is sometimes mixed with flour and dusted over the plants when dew is on, in proportion of one pound of poison to ten pounds of flour.

LONDON PURPLE.

Use in the same way and in the same proportions as Paris Green, but use more lime to neutralize its caustic properties. It is best not to use this on the peach at all.

PERSIAN INSECT POWDER.

Fresh Powder 1 ounce
Water 2 gallons

Spray on plants for soft bodied insects. The powder is frequently dusted on plants while the dew is on. The material is not poisonous to man, hence can be used in dwelling house to kill house flies and mosquitoes. For such cases, first close all doors and windows and dust the room well with the powder (usually at night) and leave it so for several hours. It is a good idea to burn a spoonful or two on hot embers so that the fumes may fill the room. Be sure that the powders is fresh, because when old it often fails to kill.

SPRAY CALENDAR FOR 1905.

PLANT.	DISEASE.	What to Apply	First Application.	Second Application.	Third Application.	Fourth Application.	Fifth Application.
APPLE.....	Bitter Rot. Scab Coding Moth. San Jose Scale.	Ammoniacal Copper Carbonate. Bordeaux Mixture Paris Green. Lime Sulphur and Salt Mixture. Bordeaux Mixture.	First appearance of rot. When buds swell. Just after fall of blossoms. Apply before the buds start to grow.	14 days later. Just before blossoms open. 8 to 10 days later. 10 to 14 days later.	14 days later. After blossoms have fallen. Destroy all windfall fruit.	Repeat as necessary 8 to 10 days later. Soak seeds 1 to 2 hours, in double strength Copper Carbonate solution before planting. Dig up and burn all badly diseased pits.	Repeat if necessary Repeat if necessary Repeat if necessary
PEAR.....	Anthracnose. Rusts.	Copper Sulphate. Copper Sulphate.	When worms appear. Before buds open.	Repeat as needed Bordeaux after blossoms have fallen.	Paris Green should turnips as trap crop under side of leaves.	not be applied after heads have started to grow. Emission.	heads have started to grow. Emission.
GRAPES.....	Girdling Worm. Harlequin Bug. Melon Aphid. Beetles.	Persian Insect Powder or Paris Green. Hand pick them; a 100 ft. Green. Destroy all plants on which first leaves appear.	When worms appear. Hand pick them; a 100 ft. Green. When first leaves appear.	Repeat as needed Repeat in 10 days.	Paris Green should turnips as trap crop under side of leaves.	not be applied after heads have started to grow. Emission.	heads have started to grow. Emission.
ANTHUS.....	Anthracnose.	Copper Sulphate and Bordeaux Mixture.	Copper Sulphate before buds open.	Bordeaux before blossoms.	Just after fruit has set.	Repeat if necessary. Repeat if necessary.	Repeat if necessary. Repeat if necessary.
RAPE.....	Black Rot Downy and Powdery Mildews. Leaf Folder.	Bordeaux Mixture. Paris Green.	Before blossoming. First appearance.	After fruit has set. It is advisable to burn buds are fully open.	After fruit has set. After fruit has set.	Repeat if necessary. Repeat if necessary.	Repeat if necessary. Repeat if necessary.
PEACH.....	Canker Worm. Curculio. San Jose Scale. Blight.	Weak Paris Green. Paris Green. Lime Sulphur and Salt Mixture. Promptly remove a Same as for Peach.	First appearance. Before blossoming. Apply before buds start to open. When fruit has set.	Repeat as needed. When fruit has set. Repeat as needed.	The loose cotton around trunk of tree and apply Kerosene Emission to it.	Repeat as needed. Repeat as needed.	Repeat as needed. Repeat as needed.
PLUM.....	Shothole Fungus. Curculio. Same as for Peach.	Bordeaux Mixture. Paris Green.	When leaves appear. Also by repeatedly spraying the tree.	10 to 14 days later. 10 to 14 days later.	Repeat if necessary. Repeat if necessary.	Repeat if necessary. Repeat if necessary.	Repeat if necessary. Repeat if necessary.
POTATO, IRISH.....	Colorado Beetle.	Paris Green.	When plants are 6 inches high.	Repeat as needed.	Repeat as needed.	Repeat as needed.	Repeat as needed.
POTATO, SWEET.....	Black Rot.	Grow slips from clean healthy potatoes.	To get clean potatoes, grow from vine cuttings.	Repeat if needed.	Repeat if needed.	Repeat if needed.	Repeat if needed.
STRAWBERRY.....	Rust and Mildews. Blight.	Bordeaux Mixture. Bordeaux Mixture.	When disease appears before blossoms. When disease first appears.	10 to 14 days later. 10 to 14 days later.	Repeat if necessary. Repeat if necessary.	Repeat if necessary. Repeat if necessary.	Repeat if necessary. Repeat if necessary.
TOMATO.....	Fruit Rot.	Bordeaux Mixture.	When fruit is set.	10 to 14 days later.	Repeat if needed.	Repeat if needed.	Repeat if needed.

The efficiency of spraying will depend upon the time and thoroughness of the applications. Spraying for diseases must be in the nature of prevention and not a cure. All sources of infection, such as diseased wood, diseased leaves and diseased fruit, should be removed and destroyed. Keep this Calendar for reference during the year. You may need to refer to it.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The severe weather we have had now for a month past and which at this writing (February 20) has not abated much, has made it impossible for any work to have been done in the garden or in the truck fields, even in Tidewater Virginia or Eastern North Carolina. This state of affairs is going to make work press heavily during this and the ensuing spring months. Land which ought now to have been either planted in the earliest crops or at least ready for planting is yet in many cases as it was left when the crops were removed at the end of the last season, or at best has only been plowed once and probably has not yet had even a covering of farm-yard manure. As soon as ever the weather breaks and the land is dry enough get manure on to it and have it plowed and set about working it at the same time applying acid phosphate and muriate of potash broadcast, and working all this well into the soil. Probably much injury will be found to have been done to the fall set cabbage, kale and spinach crops. These crops should be carefully looked over and all dead plants be removed and new ones planted from the reserve stock. Freshen up the soil with the hoe in the place where the plant is to be set before planting. In the case of the spinach crop, spring spinach may be seeded to take the place of the fall seeding. This will come in later, and probably will find a good market as spring vegetables are going to be scarce as the early crop in Florida and the Gulf States has been killed.

The planting of the Irish potato and English pea crop should have attention as soon as ever the land is fit to work. In our last issue will be found formulas for the mixing of fertilizers for most of the usual garden and truck crops, and to this issue we refer our readers. It will probably be found good policy to plant English peas in larger quantity than usual to supply the deficiency in the early vegetable crops.

As soon as the land is dry enough to work freely give the fall planted cabbage crop a working with the cultivator and stir the land between the plants with the hoe. This will start them to growth and when once they have started freely give a top dressing of nitrate of soda down each side of the row—using 150 or 200 pounds to the acre. A light top

dressing of nitrate of soda, say 100 pounds to the acre applied to each side of the rows of English peas as soon as they have started to grow will stimulate them and induce quick growth and early blooming.

Lettuce in frames should have plenty of air given in mild weather and be cut and shipped as soon as ready. In the absence of other spring vegetables lettuce is selling well. The crop in the open ground should be encouraged to grow by cultivation as soon as the ground is dry enough, and seed be sown of the earliest spring varieties to set out to keep up the supply. Other early salad crops may be sown in sheltered places where they can be protected in case of hard weather.

Strawberry beds and other small fruit plantations should be cleaned up and the ground be cultivated as soon as the land is dry enough. Where strawberries are not looking thrifty apply a mixture made up of 100 pounds of nitrate of soda, 150 pounds of muriate of potash and 300 pounds of acid phosphate to the acre down each side of the rows and cultivate in. Complete the pruning of raspberry and blackberry canes and grape vines and tie up to the trellises.

In this issue will be found a Spray Calendar giving instructions and formula for spraying orchards and fruit plantations and vegetable crops. Let this work have attention. The man who sprays is the man who is going to have the greatest chance of success with his fruit.

SCAB ON IRISH POTATOES.

Be careful to see that seed is free from scab or the same trouble will be found on the crop. If there is any indication of scab on the sets they should be soaked in corrosive sublimate solution (2 ounces of sublimate to 16 gallons of water) for an hour before being planted. This solution may be used over and over again until it is all used up. Be careful to keep the soaked sets out of the way of the people or of stock, as they are deadly poison. Cut the sets as wanted for planting, and do not let them shrivel by drying.

AWARDS MADE ON FRUIT EXHIBITS FROM THE STATE OF VIRGINIA AT THE ST. LOUIS EXPOSITION.

Virginia Commission on Collective Exhibit of Fruit, gold medal.

Jas. Dickie, Massie's Mills, apples; gold medal.

Dr. S. S. Guerrant, Rocky Mount, apples; gold medal.

Geo E. Murrell, Fontella, apples; gold medal.

D. D. Awde, Waynesboro, apples; silver medal.

W. S. Ballard, Crozet, apples; silver medal.

Dr. W. D. Dodge, Stuart's Draft, cranberries; silver medal.

W. F. Gilkerson, Fishersville, apples; silver medal.

Dr. J. R. Guerrant, Algoma, apples; silver medal.

Haden Bros., Crozet, apples; silver medal.

H. S. Logwood, Bedford, apples; silver medal.

W. B. MacGregor, Afton, apples; silver medal.

A. H. McCue, Afton, apples; silver medal.

T. T. Morrison, Bentonville, apples; silver medal.

S. H. Purcell, Greenwood, apples; silver medal.

J. C. Terry, Terry's Fork, apples; silver medal.

Geo. W. Via, Stuart, apples; silver medal.

H. S. Austin, Fincastle, apples; bronze medal.

R. L. Austin, Fincastle, apples; bronze medal.

J. O. Barksdale, Red Hill, apples; bronze medal.

G. R. Berryman, Alliance, apples; bronze medal.

Jas. C. Bentz, Nelson Co., apples; bronze medal.

D. E. Bowman, Waynesboro, apples; bronze medal.

Col. A. M. Bowman, Salem, grapes; bronze medal.

Robert Brownlee, Longwood, apples; bronze medal.

J. H. Coleman, Covington, grapes; bronze medal.

Geo. A. Coyner, Waynesboro, apples; bronze medal.

Craig & Craig, Waynesboro, apples; bronze medal.

T. J. Bacon & Co., Colliertown, apples; bronze medal.

Wm. Eubank, Bedford Co., apples; bronze medal.

Experiment Station, Blacksburg, apples; bronze medal.

J. T. Garrison, Crozet, apples; bronze medal.

J. A. Gentry, Crozet, apples; bronze medal.

M. F. Gilkerson, Fishersville, apples; bronze medal.

Dr. J. T. Hickman, Mt. Jackson, apples; bronze medal.

P. I. Huffman, Alpine, apples; bronze medal.

J. M. Johnson, Beba, apples; bronze medal.

J. W. Larick, Winchester, apples; bronze medal.

S. L. Lupton, Winchester, apples; bronze medal.

C. B. Leech, Rockbridge, apples; bronze medal.

W. F. Lupton, Fairfield, apples; bronze medal.

J. H. McClintie, Hot Springs, apples; bronze medal.

Joe Perkins, Woodson, apples; bronze medal.

John Sale, Fairfield, apples; bronze medal.

W. G. Stevens, Elsie, apples; bronze medal.

C. W. Swetzer, Fincastle, apples; bronze medal.

W. W. Templeton, Fairfield, apples; bronze medal.

W. W. Tanquarry, Winchester, apples; bronze medal.

John Thwaite, Winchester, apples; bronze medal.

M. S. Weaver, Linden, apples; bronze medal.

Walter Whateley, Crozet, apples; bronze medal.

Aaron Wheat, apples; bronze medal.

English Peas—Snap Beans—Beets—Fertilizer for Truck Crops, Etc.

1. Will you kindly advise how English peas sell in the Northern markets? What dwarf variety is most suitable? How many seed will it take to plant an acre in five foot rows (four rows on each bed)?

2. What is the best early shipping bunch bean?

3. How are beets for shipping? What fertilizer suits them best?

4. Can you give me a formula for mixing a fertilizer for watermelons and canteloupes? I used Acme Standard Truck last year; was very good, but rather expensive. Is there anything better?

5. What variety of cotton is best to plant in six foot rows with vegetables between that will come off out of the way early?

Robeson Co., N. C.

R. C. T.

1. English peas usually sell well on the Northern market when got there early enough in the season. Wood's Extra Early and Tait's Extra Early Pea are good varieties to grow. They are all improved varieties of the old Dan O'Roark, which is still an excellent variety for planting. One and a half to two bushels of peas are planted to the acre.

2. The Early Valentine.

3. Beets usually are not worth shipping to the North. They should be sold in the local markets. A fertilizer with 6 per cent. of ammonia, 5 per cent. of phosphoric acid, 8 per cent. of potash is a suitable one for beets.

4. Cabbage, cauliflower, cucumbers and cantaloupes should be fertilized with 6 per cent. of ammonia, 5 per cent. of phosphoric acid, and 7 per cent. of potash. Such a fertilizer can be made by mixing 300 pounds of nitrate of soda, 750 pounds of cotton seed meal, 700 pounds of acid phosphate, and 250 pounds of muriate of potash to make a ton. Apply at the rate of from 500 to 1,000 pounds to the acre.

5. Plant a variety of cotton that is acclimatized to your section. Such a variety will usually do better than seed procured elsewhere. This should only be grown experimentally till acclimated.—Ed.

Mention **THE PLANTER** in corresponding.

Live Stock and Dairy.

FEEDING INVESTIGATIONS AT THE VIRGINIA EXPERIMENT STATION.

Editor Southern Planter:

The cattle feeding industry in Virginia is one of primary importance to the farmers of the State, and it is one that is destined to grow in sections where it has not received much attention previous to this time. The reasons for this are not far to seek, as cattle rearing and grazing provides one of the easiest means of handling and enriching farm lands. In sections of the country where persistent clean cultivation is followed, the land sooner or later becomes exhausted, and if it is at all of an undulating character, it suffers severely from erosion—the very worst enemy of the farmer, for a violent rainfall carrying away as it does the fine surface earth with its available supply of plant food does him an incalculable damage and one that will take several years of careful culture to overcome. On the stock farm the land can be first brought into condition for grass through a proper rotation, and then when covered with a good firm sod, it is ready to hold and preserve the plant food already in the soil, and in condition to grow richer through the decay of the accumulation of grass roots and leaves, and the droppings of the animals which graze on it. Thousands of acres of valuable lands can be found, admirably adapted for stock husbandry, by reason of natural environment, which are not being utilized for that purpose in the South because the real value of stock husbandry is not appreciated, and because other systems of farming have been practiced in these districts with success in the past. The modern farmer also finds himself in possession of an exhausted soil and is forced to consider some other means of handling it in order to make it profitable.

The subject of stock husbandry is therefore a matter of established importance in the South and one that is destined to become of greater concern to our farmers in the future. So that one of the most important and useful lines of work that can be pursued by the Experiment Station will be an investigation of the many unsolved problems relating to this important industry, which now await solution. For while the business of stock feeding has been successfully conducted in the past, increasing competition and the high price of commercial foodstuffs together with the difficulty of securing the grade of stock most desirable at prices which formerly prevailed, makes the successful handling of cattle a more and more difficult problem. Stock raisers generally will be in-

terested, therefore, in learning something of the plans which the Virginia Experiment Station proposes to put in execution in the hope that some of these questions may be solved in the near future for their benefit.

It is only proper to say before going into the details of this work that the writer will have associated with him in these investigations Prof. John R. Fain, formerly of the Tennessee Experiment Station. Prof. Fain has direct charge of the College Farm and it is expected to grow all the roughness used in the investigations on the farm, and a part of the grain



PROFESSOR JOHN R. FAIN.

as well. The cost of producing these various crops and the draft they make on soil fertility and the benefits of growing them in rotation will all be studied along with the cattle feeding investigations. So that the station hopes to be in possession of facts that will enable it to inform the farmers, not only as to the cost of producing the different crops, but also their relative merit for making beef. This is an important line of work which has seldom been undertaken by Experiment stations in this country, and yet it is one of general interest. The labor involved in this investigation is very great for it is a tedious task to keep an accurate record of preparing and seeding the land and cultivating and harvesting the different crops therefrom. Through the co-operation of Prof.

Fain it will be possible therefore to accumulate much valuable data on farm management, a question which has not received the attention its importance merits. Believing that the silage is one of the most important and useful crops that can be utilized in the South, special attention will be given to the growing of crops for this purpose. It is believed that corn, sorghum and soy beans can be utilized to some advantage, and an effort will be made to determine the best distance for planting these crops and the most economical methods of cultivating and harvesting so as to obtain from a given area of land the largest amount of nutrients in the most desirable form for animal nutrition. In order that the relative merits of silage may be determined part of the various crops grown will be cured out in the form of coarse dry fodders and fed in opposition to the silage.

Some attention will also be given to the restoration of meadows which have been overpastured, through reseeding and proper fertilization. The cost of establishing meadows and the carrying capacity of different grasses is a matter of importance to all who are interested in live stock. This of course is a difficult investigation to carry to a successful issue, but it is hoped that arrangements can soon be perfected by which the relative merits of making beef on grass lands, and finishing in the stall on silage and other dry foods, can be determined. The silo provides food which can be substituted for grass to advantage, but to what extent has never been accurately determined; hence the importance of this question.

The association of the work of the farm and the live stock investigations through the co-operation of Prof. Fain will thus enable the undertaking of certain very important investigations which would otherwise of necessity be neglected.

Specific experiments will be undertaken with beef cattle to determine, as already indicated, the relative merits of silage. Other forms of dry roughness, such as timothy hay, shredded stover and corn fodder will be provided. It is now admitted that through the use of larger quantities of suitable roughness the amount of meal required for a given gain can be considerably lessened, and of course, the concentrates form the expensive part of the ration. Therefore, anything that will tend to reduce the amount of grain fed means the production of cheaper beef. Corn and cob meal, cotton seed meal, gluten meal, linseed meal and various other commercial food-stuffs rich in protein will be fed along with the several forms of roughness, the idea being to ascertain which will be the best combination of concentrates to use.

Various forms of silage will be fed in opposition to each other which is of itself an important matter, and an effort will be made to determine its value for spring and summer feeding, as compared with turning the cattle on grass. In fact, the whole subject of silage and its relation to the making of beef will be given special attention, for from investigations already made it would seem that this offers a means of producing cheaper beef in the South than it has hitherto been believed possible to obtain.

The various forms of food derived from the corn plant will receive attention. For example, whole stalks will be fed against shredded stover and corn fodder. An effort will be made to determine the relative cost of shredded stover and silage, and whether the corn taken separately from the stalk and fed back in conjunction with shredded fodder or silage gives a greater profit than where corn stover is grown so as to produce a larger number of small ears, and the whole fed directly to stock without shredding or husking. Corn grain will be utilized for feeding in all its different forms. For example, it will be fed on the ear, split on the ear with the cob, shelled, crushed and ground with the cob. While a good deal of work has been done with corn, it can not be said that its relative merit when fed in these several forms has been accurately gauged, and as corn forms the basis of our cattle feeding industries it is a very important matter to know in which form it will produce the largest amount of beef, for if whole corn on the ear can be fed to the same advantage as when ground with the cob, a great deal of labor and expense which is incurred in the latter operation may be saved.

It is also very important to determine whether it is best to feed cattle under shelter or in the open. Some stockmen believe it is best to feed directly on blue grass sod, but the relative merits of the different methods of handling cattle are not really known; hence the importance of these trials.

Much difference of opinion exists as to whether long feeding periods or short feeding periods are most economical, and yet this is a question of grave concern to our feeders. The subject of maintaining stockers to be finished on grass the following summer will receive the attention which it merits. At the present time many of our feeders handle their cattle through the winter so they shrink anywhere from seventy-five to 150 pounds per head. It does not seem that this is a desirable practice and yet it has not been shown that it pays to feed grain, silage or other forms of roughness through the winter to any considerable extent. It may be possible that it will be very desirable to take cattle off the grass in the fall and

push them on various forms of foods so as to secure a highly finished animal fit for immediate shipment in April or May before the grass cattle are ready, and then start out with a new lot of stockers to graze through the summer and finish in the early winter. The relative merit of carrying the cattle through the winter in an indifferent condition and finishing them on grass the following summer, or giving them a high finish in the winter through forced feeding is thus a matter worthy of careful attention.

Steer vs. heifer beef is also an interesting topic. Present investigations would seem to show that heifer beef should be worth quite as much as steer beef, but for some reason or other the heifers are generally discriminated against, and if there is any justice in this it is a matter that should be thoroughly established. Heifers can often be bought at a little lower figure than steers and if they will finish out as well, it will add considerably to the feeder's profit.

The best age at which to commence feeding operations is another matter not generally agreed upon, some preferring yearlings and some three-year-olds. It is also becoming a problem of great importance to stockmen to know where to obtain the grade of stock he desires to put in his feed lots. It is believed that this question can be considered along with some of the other mentioned, and it is hoped that the station can find the means to obtain stockers from different sections of the country so that a special study can be made of this important subject.

It is also desirable that an investigation of the cost of raising calves and the most desirable crosses to make for this purpose be made. This involves a question of animal breeding, and of necessity is a very expensive piece of business, and one that would require years of careful and painstaking work. Certain grades and crosses available on the College Farm will be saved and fed for beef in the hope that some useful information on this subject will be obtained.

This is but a rough outline of some of the investigations with special reference to beef production that the Virginia Station hopes to undertake in the near future. One important investigation is already in progress and this will be followed by others next year. It is hoped that the stockmen of the State will realize the importance of these investigations and lend their earnest support to the movement. It is impossible to accomplish results requiring the outlay of such large sums of money and careful concentrated efforts of skilled workers without the expenditure of considerable sums of money. Investigations with live stock are at best expensive and laborious

and the work accomplished by the Station will be measured largely by the support it receives from the State through the interested stockmen. There is no doubt about the importance and value of the results the Station can obtain if it has the means and support necessary to carry its work to a successful issue. The workers are enthusiastic and ready to do all in their power to secure a desirable consummation of these investigations. It is needless to say that many circumstances will arise to interfere with the carrying out of the work as outlined above. It must of necessity involve several years of constant application, and therefore the stockmen should not become impatient, for every effort is being made with the facilities and equipment available at the present time to get results that will be of immediate service to them.

ANDREW J. SOULE.

Virginia Experiment Station.

RUSTLING QUALITIES OF THE ANGUS—A REPLY TO MR. BOOCOCK.

Editor Southern Planter:

To the best of my recollection, I have never spoken or written against that magnificent breed of beef cattle known as the Hereford. This fact, together with the farther fact of my having probably brought to the South within the past three years more high-class beef bred cattle than any other one man, would seem to entitle me to reply to Mr. Boocock's article in the February Planter, and also to his correspondent from Mecklenburg county, Va., as to the rustling qualities of the Angus vs. Herefords as breeds.

If the gentlemen had confined themselves to a discussion of the many excellent qualities of their favorite breed I should have said nothing but "amen" to their remarks, as the South is large enough for all good breeds and none in the whole country is more anxious than the writer to see the numbers of all good cattle increase and multiply in our beautiful "Southland," and another reason is that I am a sincere admirer of this grand breed of cattle. My former home was located only a few miles from the home of the owner of that grand beast the Chicago Worlds Fair champion "Ancient Britain." Another neighbor was that prince of good fellows, John Hooker, who bred the famous "Dolly" 5th, perhaps the most popular champion cow the breed has produced. And many a time the writer has stood and looked with admiration upon that almost perfect form of the grand champion "Dale"—probably the smoothest bull the breed has to its credit. I have also some acquaint-

ance with the breed in the range of the far West, and know of a certainty that their reputation as great range cattle is well earned.

But the gentlemen, in the article mentioned, did not confine themselves to a discussion of the merits of their breed of cattle, but chose to make certain statements concerning my favorites that I believe were entirely unwarranted in the light of the developments of recent years. And if they could have been true of the breed fifteen years ago—before ranchmen learned the folly of trying to work polled bulls on the open range along with the horned breeds—certainly do not apply to the Angus breed to-day on the range or anywhere else. And I wish, not only from personal knowledge, to refute the statement, that the Angus are (in Colorado or elsewhere) "miles behind the Hereford in rustling qualities, but also to offer testimony from some of the greatest range cattle breeders in the world that the Angus is the peer of any breed as range rustlers and calf getters, and that their produce is more sought after by cattle feeders than the produce from any other breed.

1st. Mr. Boyce of the XIT ranch (the largest in the world, said to the writer in 1902, that he wished every animal on this ranch was a "black" as they were by far the best sellers; that they had disposed of all the steer crop from the "blacks" down to calves, but had plenty of ones and twos of the other breeds to dispose of. These people handle all three breeds, have a \$12,000,000 investment, and have grazed on their ranch at one time no less than 127,000 head of cattle.

Col. A. G. Boyce, manager of the above named ranch, in reply to a letter from Mr. Geo. Findlay (president of the Angus Breeders Association) as to his opinion of the Angus breed on the range, said: "You ask me what my experience with the Aberdeen-Angus as range cattle has been. In reply I beg to say that after twelve years experience I am free to say that as range rustlers and calf-getters no breed excels them. We branded last year 9,000 calves, the get of pure bred Angus bulls. I have been breeding them in separate pastures since 1888, putting the same number of cows to the bull as I do with the other breeds, namely the Herefords and the Shorthorn, and have always had as good a per cent. from the Angus as from the other breeds bred in like manner. Hence the idea that is or was so commonly circulated and talked that the Angus were not calf-getters has been proved beyond a doubt to be incorrect."

The following from another Texas ranchman, Mr. John Kennedy, manager Deervale Ranch Co., is right

to the point. "I think the Aberdeen-Angus cattle the best for the range of any of the beef breeds. They will be fat when the other kinds are in very poor fix."

Mr. W. H. Mallory, representing the famous packer, Mr. Nelson Morris, who owns a ranch in Midland county, Texas, adds his testimony as follows:

"I beg to acknowledge receipt of your favor of December 5th, which remained unanswered owing to my absence from Chicago on business connected with our ranch. I am very pleased, however, to state that in my opinion Aberdeen-Angus cattle are most satisfactory for range purposes, and we find them far superior to any other breed of cattle for that purpose. It gives me very much pleasure to write you this."

Col. Chas. Goodnight, who founded, built up, and made a national reputation for the J. A. brand of Hereford cattle, and is now breeding Angus for himself, writes:

"As to what I think of the cattle, I have this to say. I do not especially like them as a race, but there is no question that in a cold bleak country like this there are no cattle that will compare with them. I do not think any unprejudiced cattleman or breeder will pretend that there is any race of cattle that will put on flesh in proportion to what they eat like Polled Angus. I have the Herefords and Shorthorns as good as anybodies and the loss on the blacks is always least, greatest on the Shorthorns."

I will conclude with the following from Mr. G. M. Hedderich, located in the northwest corner of North Dakota: "As to the adaptability of the Angus cattle to our Northern climate, it has been our experience, as well as the experience of our neighbors, that during a storm the last animals to seek the shelter of the timber are the 'bonnie blackskins,' and when the storm abates they are the first to leave the shelter in search of food. Our advice to our neighbors when enquiring as to the kind of bulls they should use in their herds has invariably been, a pure breed bull of any beef breed will do, but for uniformity of type, quality and color, a combination which makes 'market toppers, use by all means an Angus bull.'"

I trust that the above testimonials will serve to throw some light upon the question of the rustling qualities of the "doddies."

A. L. FRENCH.

Rockingham County, N. C.

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.

THE BILTMORE SALE.

Biltmore Farms Fifth Annual Sale of Berkshires took place this year under very trying conditions, which, but for the high quality of each offering as it was driven in the ring, and the presence of one liberal buyer would have meant some financial loss for the farms. With the thermometer five below zero the night before the sale, a large number of buyers were kept at home, others turning back or missing connection, the management was very gratified with the results, and with the additional sales made since then privately, and feel fully satisfied with the average which was \$105.54. The mails were all late from the west and many bids (which would have made quite a difference in the sale) arrived afterwards. Some decided bargains were also secured, animals going at one-half what they were worth in the herd as producers, or what they would have been priced at privately. The buyers were so satisfied with them that in spite of several efforts since then to buy some of them back at private sale, not a buyer has parted with his purchase.

The attraction of the sale seemed to have been a young imported sow, Taet, which was sold at the last sale for \$255.00 and purchased back for \$305.00. Mr. Calhoun, from South Carolina, made such a strong request that she be included that it was considered good policy to offer her, especially as her two daughters were in the sale, and so much of her blood is now in the herd. She is inbred to old Parish Council, being by a son, and out of a daughter of the old sow. She brought \$400.00, and later on her two daughters were sold for \$230.00 each to Mr. Coffman of Bluefield, W. Va., who bought with the privilege of choice, and probably did a wise thing in taking both. Mr. Coffman was an old customer of Biltmore farms, and arrived just before the sale with a western breeder, Mr. Council, as advisor. Having purchased the first prize Junior Yearling boar of the St. Louis Exposition, he was looking for some sows to breed him to that would have the quality and breeding behind them to make a reputation for his herd and for his boar; and whilst he only intended buying three or four, he simply could not stand seeing bargains go by and purchased a total of twenty-one head at a price just under \$3,000.00.

No better developed, better finished or better bred sows have gone under the hammer on these farms, and Mr. Coffman should certainly be congratulated on securing such a great and even lot, that are bound to place his herd among the very few at the top in the State.

Buyers were present from eight States. Prominent among them were Dr. J. F. Connor, from the Alabama Experiment Station, who arrived just after the sale, but who telegraphed to buy five head at the average of the sale, which arrived just in time, and four grand sows were secured for him, selected by the manager of farms; Dr. J. D. Kirk, of Roanoke county, Va., another old patron and breeder, secured a beautifully bred sow. Also the Forest Home Farms, of Purcellville, Va.

The sale pavilion was steam heated, and with closed carriages and the hospitality of the Kenilworth Inn, the few buyers who braved the weather were kept as comfortable as possible; but the farm management has decided to abandon these winter sales, for the present at least, and commence with a new date on August 22, 1905, which, this year, immediately follows the convention of the Southern Cotton Planters at Asheville. At this time of the year visitors to the farms can be certain that the cool and fine weather will be here, and with the growing crops and extra condition of the stock, the trip can be made a much more interesting one.

Breeders of Jerseys and Berkshires and all interested in the improved agricultural methods will, it is hoped, mark this date for at least a week's stay on the farms. An interesting programme will be published in the early summer.

INQUIRIES HAVE BEEN ANSWERED.

Editor Southern Planter:

I am very glad to state that Prof. A. M. Soule has answered my inquiries very completely in the February Planter. The information given is just what I called for from the standpoint of a practical farmer who makes butter for family use and not to sell. He states that "it is all wrong to leave the dairy industry to the management of the ladies." . . . It is entirely too important an industry to be given a back seat, as it were. I agree with this sentiment in full. But, nevertheless, in the Southern States, especially, the ladies superintend the making of farm butter for family use, as a rule. Often times the "servant" or "hired woman" does the real work. Now, as to dairies for the making of commercial butter, that is entirely a different thing—a very important industry for Virginia that should be greatly developed. When it is, I am sure the men will take hold of it and run it. We must take the facts as we find them to begin with.

I am also very glad to know that full provision will

be made to give practical instruction in dairying in the new agricultural building, both for male and female students. When the board asked for \$20,000 to build and equip such a building, I fought it through the Planter and the legislature did not grant the appropriation. I advocated \$50,000 for the building and my article was read before some members of the next legislature and \$35,000 was given for the building, besides the President informed me that by using home talent in superintending and fitting the building about \$10,000 more would be put into the building. This would put up a building something like what Virginia should have. Naturally, the farmers of the State like to hear about the plans for this building. Prof. Soule has given information along this line also. One prominent farmer from Salem, Virginia, wrote me recently that if Prof. Soule would answer such practical questions about farming as I had asked him he would be "almost swamped with inquiries." He invites correspondence, now let the farmers come with their inquiries. Prof. Soule is a live man and I think will measure up fully to the high standard we set for him in the beginning. I want to hold a kind of "Planter-Farmers' Institute," and expect to fire questions at Prof. Soule or anybody else whenever I feel like it for the benefit of the farming interests of Virginia.

That Sorghum article of his in the February Planter is good reading. I have often thought of sorghum as a forage crop for Virginia, but there were always two objections that rose up in my mind that prevented me from growing the crop for my stock. I may conclude to try it later. One was that it is very liable to "colic" horses and "bloat" cattle unless fed with much care in the beginning. Another is the very wet seasons we some times have at harvest time making this extremely sappy forage crop, difficult to cure. There is no doubt about the crop growing well in the State as I have grown it myself and seen others grow excellent crops for the manufacture of sorghum molasses. I have seen large fields of it grown and successfully harvested and fed in Texas. But the climate there is often extremely dry at harvest time. I have seen Texas farmers cut the sorghum stalks while very green and fatten hogs on the crop. This was new to me.

There is no doubt but that we need a greater variety of forage crops in the State. Hay and corn make a costly ration for the farmer to feed. By themselves, they do not make a good food for dairy cattle, nor does corn alone make good pork. Why not

grow more peas, clover, alfalfa, oats, millet and sorghum?

R. H. PRICE.

Montgomery County.

ANGUS CATTLE.

Editor Southern Planter:

In the February issue of "The Planter," I notice an article claiming superiority of the Herefords over the Angus. I want a small space in your columns to defend the best beef breed of cattle there is to be found on the Virginia farms of to-day. Two years ago I wanted to buy a sire of one of the leading beef breeds, as your paper and other farm journals advocated full blooded sires. I went to several well known cattle dealers—men who deal in cattle for the beef that is in them, regardless of conformation or stock—they having no special breed advertised or championing no breed. I wanted the kind of cattle that would suit the Virginia pastures best, that would give the best results from feeding and would hustle for their living. These men were unanimous in advising me to get an Angus. I went to Greenbrier county, West Virginia, to purchase my bull. There I saw Angus, Shorthorns and Herefords together in the same pasture, under the same conditions. The Angus were the fattest cattle. I have both Shorthorns and Herefords on the farm with the Angus, but they fail to keep up in flesh as well as the black cattle on the same feed. These being hornless and breeding hornless gives them many points over any other breed. The cows are well formed, easily kept and good milkers. Their docility makes them the ideal farm cow. Originating in the highlands of Scotland they had to hustle for a living from the beginning and to-day we find them all over the "Sunny South," still hustling. They are gaining rapidly, everywhere they have been introduced. Virginia is becoming full of the deep-bodied, glossy black cattle.

R. A. GILLIAM.

Covington, Va.

ANGORA GOAT ASSOCIATION FOR THE SOUTH.

Mr. M. S. Valentine, of the Diamond Ranch, Rockcastle, Va., would be very glad to hear from all Angora goat breeders over the South and Virginia especially, also prospective goat breeders, giving names and addresses, with the object of organizing an association in view of obtaining recognition and offering prizes at State and county fairs in Virginia

North and South Carolina, Alabama, Tennessee and Maryland. He expects to call a meeting of Angora goat men at the ranch some time in March or April.

THE HANDLING OF EWES FOR WINTER LAMBS.

Editor Southern Planter:

To the Virginia farmer the winter lamb business is the most profitable form of sheep husbandry. There is no section of the country better suited to this business. For one I fail to see why the Virginia sheep raisers should allow the large profits of this trade to fall so largely into the hands of the progressive farmers of Ohio and New York, for we are much nearer the markets than the men of Ohio and have a much finer climate than those of either State. The interest in this business is growing rapidly in Virginia and one by one the conditions are being met. The greatest difficulty was securing the lambs early enough. It is very important to get the lamb crop in December, if the lambs are to get to the April markets. Here is just where so many of the farmers have missed it. Ordinary stockewes or Down ewes of high grade will not lamb before January, except very rarely. It interested me to learn some years ago that the ewes handled east of the Alleghany ridge lambed about three weeks earlier than ewes on the west side, and this applies to all the valley region of Virginia between the Blue Ridge and the Alleghany mountains, as well as to the Piedmont region. I do not know whether it is also true of the Tidewater section or not. This means that a bunch of stock ewes to the east of the Alleghany mountains will lamb between January 1 and January 20th, if properly handled, while ewes on the west of these mountains will not lamb in any numbers before January 15th or 20th, and will drop their lambs mostly in February. I have heard some say that it was due merely to the fact that rams were not let to the ewes soon enough in the latter section. I can speak from experience along this line, for we turned our rams in during July for three or four years in succession and I remember very distinctly that we never had but one ewe that lambed before January, and, strange to relate, it was always the same ewe. Then about three or four would lamb during the first days of January, a few more later in the month, but no large number ever lambed before February. I had a letter recently from a sheep man in Tazewell county stating that he had 111 lambs on January 12th. I thought I might push the lambing period earlier by persisting in this turning of the rams in during July. If I remember correctly there

was a slight advance in the lambing period after four years, but it was very slight and convinced me that the ewe would pass over the river, before I ever got her trained to early lambing. After we got the Dorsets, we let the Dorset ewes run with the Down ewes and so all were kept under the same conditions. It was always very interesting to note that the Dorset ewes were the only ones that caught service and lambed in November and December. I observed an interesting thing about the lambing of the Dorset ewes. It seemed that the favorite time for them to lamb was from November 15th to December 15th. Very few of them lambed earlier than this, though I have turned the rams in in April. I recalled the fact that in New Jersey Dorset ewes lambed in large numbers in October and when I was in England last summer I found that the Dorset ewes seemed to drop lambs just as early in the fall as the shepherds would permit. By testing two or three ewes I was convinced that some Dorsets would lamb any month in the year, but I am inclined to think that in West Virginia the majority of Dorset ewes will drop their lambs after November 15th. It would be interesting to learn if Dorsets will lamb east of the Alleghanies during October. I am inclined to think they will. Another point I would raise is whether Dorset ewes that are lambed in the spring for several years will lose their habit of lambing in the fall. As far as I know this has not been tested. A ewe that lambed for us twice in the spring, afterwards produced fall lambs regularly, but this is the only instance that has come under my observation.

This is digressing a little and yet it is one of the most important questions for the winter lamb producer to discuss. Suffice it to say just here that the man who plans to raise winter lambs with success must get his lambs dropped in December. I know at present but two certain ways of accomplishing this. First, using pure bred Dorset ewes. (A Dorset ram cannot be depended upon to change the regular season of the ewes. It takes Dorset blood in the ewe's veins to get a fall producer.) Second, using the second cross Dorset ewe. A number of first cross Dorset ewes will lamb in the fall, but it can not be relied upon. The second cross promises to be the cheapest solution to the problem.

Well, we take it for granted that the farmer is fixed to bring his lambs in December. I would want them to come early in the month so as to miss the bad weather just before Christmas. It will save great loss in lambs and will give the ewes a chance to give the little chaps a good push before real winter

feeding begins. We next must ask about the handling of this flock of ewes. At the very outset let's put it down as a safe principle that it will never do for these ewes to begin to run down before lambing starts. You never want stock ewes fat, but they must be in thriving condition. A ewe that is going down is not in thriving condition. Just here is where so many make their mistake. The ewes must be watched closely, especially, if there has been a drouth in the fall and the pastures have been very short. To make sure that this will not happen, it is very important to have a field of rape or rye that will furnish grazing during November and December. Many an old corn field lies wasted all winter waiting for the oat crop in the spring. Why not use this land for growing rape and rye? Keep close watch on the ewes and if any of the meaner keepers begin to show that they are losing flesh, it is high time that the grain ration is begun. At first a small feed once a day will suffice. In New York this is often begun in the early part of November, but in our superb climate grain feeding is rarely required before December 15th, except of course, to ewes that have young lambs. Here we have the advantage of our northern friends. We have a far larger advantage in the spring. In most sections of Virginia there is no need of stabling sheep before Christmas, unless there should be cold rains. Never let sheep stand around in cold rains, especially breeding ewes. I don't know any form of livestock, except polar bears that cold rains are good for.

Next point is that you dare not enter a winter without enough of the proper feed to carry the flock through. Spend your summers thinking over this and putting in these stores, if you propose to raise winter lambs. It is too late to think about it in November. Here again many a farmer "reckons without his host." What kind of feed will be required? First and last and all the time, milk making feed. Do you have milk cows? If you do, I hope you have learned to feed for milk. I feel sorry for the farmer who has three fine cows and then has to borrow milk from his neighbor. When I find out that he feeds his cows on fodder, straw and corn, I feel sorry for the cows, too. You can not afford to make such mistakes if you raise winter lambs, for you will certainly come out at the little end of the horn, for you can't borrow from your neighbors for these.

Well, what feed do you need? First, clover hay, which may be alfalfa; second, oats; third, bran; fourth, roots. It is very hard to get along without these. Certain other feeds can be used along with

these to afford variety and to save expense. Corn-fodder, if nice and clean, can be used for roughness occasionally along with the clover hay. Cowpeas make a fine substitute for clover, if you must have this substitute. I would prefer some of both. You do not like biscuit every morning in the year for breakfast. If your wife did not treat you better than this, you would stop at the hotel occasionally. (No, I take that back. Not even this would induce you to stop at the village hotel.) But you see the point. Corn when used in small quantity and judiciously is a fine feed. Use it very sparingly in feeding breeding ewes and yet a meal of corn and bran every three days will do no harm and may help along. Soy beans would make a fine substitute for oats occasionally and would furnish a good percentage of oil or fat, which is very necessary. In fact, if you did not have soy beans, it would be well to use some cotton seed meal or linseed meal. Some linseed meal added to the feed twice a week will help out, and for the lambs it is simply splendid. It keeps them looking slick and healthy. In roots you can not beat rutabagas. These are not injured by freezing like mangolds and are very palatable. Breedings ewes must have one feed of roots per day after they have been placed on dry feed and it helps the flow of milk to start early in December and keep it up till grass shows in the spring. A corn cutter fastened at the distal end to a block of wood will answer well for a root cutter.

You have a full list of feeds. Many others could be added, but your judgment would suggest how these should be used.

There is quite a study before you to know how to use these feeds. It is necessary first to devise some plan of feeding your ewes in sections if you are to have the best results. I know you will exclaim at the trouble of this, but it is the thing that pays. It is certainly very important for the man who is running a fine flock of ewes. I shall in the next issue try to present the plan of the sheep barn on Edgewood Farm so as to make clear how we handle our flock in sections and will also present a plan for the most convenient sheep rack I have ever seen.

You ask what I mean by sections. You are to feed the ewes that are just about to drop lambs to themselves, the ewes with lambs one week old to themselves, ewes with older lambs to themselves, sick ewes to themselves and the rest of the flock to itself. This is a difficult thing to accomplish in a large flock, unless you are fixed for it, but the plan must be carried out to some extent, if you are to have

success. Several weeks before lambing ewes will not require such heavy feeding and in the grain ration you can use more corn, if you choose, a mixture of bran and corn, one of corn to two of bran by measure will make a very good feed. Oats may often take the place of the bran for a change. These ewes will require less roots also. A week before lambing it is best to drop the corn entirely and use a feed consisting largely of bran; a few oats or soy beans added would not be out of place. The feed of roots is now increased to two pounds per head a day.

This same feed is continued until the lambs are a week old, except it is increased in quantity after the second day. A ewe that was taking two pints of bran and oats per day before lambing will now take three pints. Ewes with older lambs are fed a stronger diet. Here is where your soy beans and oats will come in. A good grain ration for these ewes would be oats five parts, bran three parts, corn one part by measure. I know that parts by measure is not very accurate, but it appeals to most farmers, and they wont go far wrong if they use the above proportions. These ewes should be fed liberally on roots, at least five pounds per day per head. Sick ewes are to be fed with the greatest judgment and generally the feed they will eat best.

The next important thing is to have a lamb creep in the shed in which you will always keep a mixture of bran, corn meal and linseed meal for the little chaps. This will help the mothers greatly, and will push the baby mutton. It takes food to make it in the winter time, and this cuts profits some, but close figuring shows that you can feed a lamb all he will eat and the difference in price will pay for the extra feed, the trouble and give you a surplus over the profit on the lamb that sells in May and June. Last year such lambs sold at astounding prices, and we are beginning to hear rumors of similar things this season.

I am aware that I have been keeping before you the ideal plan of feeding your ewes. It might not always be practical, but it is always best to know what to do if you don't know how. A man with good judgment can get around many practical difficulties and accomplish fine results if he has a safe plan to work on.

To sum up the winter lamb problem: First, the right kind of sheep; second, the right kind of feed; third, the preparing of this feed at right time; fourth, the right method of feeding the flock.

H. B. ARBUCKLE.

Maxwellton, W. Va.

ANGORA GOATS IN NEW MEXICO.

Editor Southern Planter:

Just a few lines from this far away corner of the far West to tell you how the Angoras down here are doing. It is the grandest sight in the world to see the thousands of Angoras come pouring in from the mountains at night, coming to the coralls. On the large ranches they often run 2,000 to 5,000 Angora goats and to see this number come pouring down through the canyons and valleys is enough to set an eastern goat man crazy. They are headed by wild looking, longhaired Mexicans and white men, all carrying Winchesters to keep off the timber wolves, mountain lions and coyotes which constantly run in on a herd and pick off a few. The more I see of this country the more I know what a lot of advantages we have in Virginia and all over the South. The Angora men here lose at least a pound to two of mohair from the Live Oak brush pulling it out in the spring, and here they have to shear twice a year owing to climate conditions. One day its snowing, another the sun is hot enough to discard coat and vest. There are about thirty Angora ranchmen in this country and they are doing well, and most of them very wealthy. It costs a great deal to ship mohair from here to the mills and a great deal of it has to be freighted over the mountains to the railroad in large freight wagons and six mule teams before the sacks can be loaded onto the train to start on the 3,000 mile trip to the mills in Maine and Massachusetts. Then, too, losses are great here, owing to varmints, such as bob cats, wolves, coyotes and an occasional mountain lion. This range is strictly a goat country, very few cattle are in here, they can't live and goats find a very fair living. The country as a rule is very hot in the day, but as soon as the sun sinks behind the mountains the weather is very cold. I have taken several pictures of the range and goats, which I will send you when they are developed, that will show our immense advantage over this country for brush, etc. Living is very high here too—a can of tomatoes selling for 30c., and a small can of potted meat that we buy in the east, for 15 and 20c., selling for 35 and 40c. I am living in hopes of seeing our overgrown plantations in Virginia, North Carolina, South Carolina, and Tennessee all turned into great Angora goat ranches and the owners prosperous and wealthy.

M. S. VALENTINE.

Kingston, New Mexico.

In writing to advertisers, mention PLANTER.

The Poultry Yard.

WORK IN THE POULTRY YARD.

Editor Southern Planter:

At this season of the year there is nothing of more importance than keeping our poultry well fed and free from lice. The erroneous idea that lice do not bother poultry in cold weather causes more trouble for poultry breeders than most any other cause. At least among new beginners, and they are the ones to whom poultry notes are of most benefit. Older breeders need to have their memories jogged occasionally on the subject, lest in their numerous other duties they forget for a time. We must ever be on the outlook for this worst pest of the poultry yard. I wish all who are resting in the belief that their poultry does not get lousy would put on their spectacles and go among their poultry, take up a fine looking cockerel, and just below the vent among the soft thick feathers look very closely. I think you will find the lice swarming, unless you have very lately treated them for lice. We go among our fowls at least every two weeks after warm weather comes and dust them with insect powder to kill the lice. Then spray the roosts with a liquid prepared for this purpose. This liquid is made by taking equal parts crude carbolic acid and kerosene oil and sprayed with an atomizer. This if faithfully kept up, will destroy the pests. Also where you have sitting hens sprinkle powder in the nests to kill the lice before the chicks come out. The chicken yard with its many small duties is a wonderful health resort for mothers and daughters who by force of household duties are shut up in the house year in and year out. Chicken raising is more enticing to many women than drumming a piano or sewing busily from morning till night in some fashionable dress-making shop. We will not be able to put on quite so much style at our work, and our hands will not be as soft and white, but we will relish our dinner much better and our slumber will be more refreshing after the day has been spent at this kind of labor. If you have any love for the feathered tribe, I advise you to study the poultry question. I think poultry raising is an ideal occupation for women who love animals. In order to raise healthy, vigorous chicks, full of life, having good stamina, it is necessary to get eggs from stock which has all the desirable qualities which we would have in our chicks. The fertility also depends much on the health and vigor of the stock and is influenced greatly by feeding. So to get best results, I mean by this strong germs in the eggs and vigor in our

chicks, young and old, must be fed right. I will tell you how we feed our chicks. Chicks hatched in a clean incubator are free from lice to begin with. This is one advantage they have over chicks hatched by mother hen. We have a brooder in a warm place, the temperature should be kept at 80 degrees the first week. The floor should be covered with about two inches of clover chaff or coarse, dry sand. The food given in the chaff gives exercise, which they must have to grow well. We find no better feed for the first two feeds than hard boiled egg chopped fine, shell and all with a bit of bread mixed in. Then feed rolled oats scattered in the chaff to induce them to scratch for it. They will surprise one who has never seen the energetic little fellows at work. We feed cracked corn with rolled or pinhead oats. Rolled oats make the best chick feed for a strong, healthy growth. They should be fed as early in the morning as possible. They should be given free range. They must have green food, chopped cabbage, mangel wurtzels, etc. The early hatched chicks and those in a limited range should have fresh ground bone, beef scraps or other animal products to take the place of grasshoppers and worms. They relish a mash made of bran and sweet skimmed milk, made quite dry. This is very good for young growing chicks. Fresh water charcoal and grit should be kept before them constantly. Lack of grit and charcoal causes indigestion and bowel trouble, things to be avoided. Never feed sloppy food of any sort.

Virginia.

MRS. CAL. HUSSELMAN.

A HOME MADE BROODING OUTFIT.

Editor Southern Planter:

At the present time, no doubt, many women readers of the *PLANTER* are trying to raise early chickens for market.

I have seen a number of people set hens and have them brood the chicks in their kitchens or other warm room of the dwelling. Some have partial success by this method, others none at all. All will agree that it is a filthy and disagreeable and bothersome way of raising a few chicks.

If I were going to raise some early broilers and didn't care to buy even a cheap brooder, I would adopt a plan described several years ago in a poultry journal which I believe would prove successful. At any rate it would be cleaner and far less troublesome than the "hen in the kitchen" method. The extra

chicks raised would more than pay for the oil used. Procure a box (which must be made draught proof) as nearly three feet square as can be gotten, or it may be two and one-half by four feet; have it no higher, inside measurement, than thirteen inches, twelve is better. Must have both bottom and top to the box. Convert the top into a solid lid and hinge it to the back end of the box. Adjust it in such a way that when closed it will allow no warm air to escape from the inside. Cut a circular hole six inches in diameter into each end of the box one inch from the top and four inches from the back. Put together two joints of five inch stove pipe and insert through these holes, so as to have one end of it protruding at each opening, and adjust an elbow to each end of the pipe, letting the open end hang downward with small wire and four nails driven opposite each other about the opening fasten the pipe so as to have it hang exactly in the centre of the six inch opening. This will admit of a current of fresh air playing about the pipe and make it absolutely safe. Fresh air entering here will also be warmed some degrees at once. A small metal lamp is to be set under one of the elbows to furnish the heat for the inside; the elbow at the other end being also turned open end downward will compel the heat to completely fill the pipe inside the box before escaping at that end, and will also prevent too strong a draught for the blaze on the lamp.

Now you will want to cut two window openings 9x11 inches in the front wall of the brooder, one inch from top and two inches from the ends, which are to have each a 10x12 window light fastened over them either inside or out as suits you best, and which can be done by driving ordinary carpet tacks about the outside of the glass into the wood. Cut another square opening in the centre about two inches from bottom, five inches high by four inches wide, to be used as the entrance into the brooder for the chicks. Tack over this at the top so it will hang down, a piece of felt or other cloth, which you should slit up nearly to the top; this, to the mind of the chick, represents the wing of the mother hen.

If you will now set apart one end of your kitchen or other warm room you wish to use for the purpose, with a two foot high and proper breadth enclosure, the longer the better, and place your home made brooder into one end of it, you will have a model miniature brooder outfit, which, with proper attention, ought to give splendid results. Cover the floor of the "yard" and the brooder with two inches of clean dry sand, and this with two inches depth of cut hay or straw for them to scratch in. Keep a sufficient blaze on the lamp to furnish the needed heat.

Keep fresh water before the chicks and without fail provide small *grit*, not gravel. Keep the chickens dry, do not let the scratching material get wet from the drinking water. Let no draughts play upon the lamp. If the temperature of the room gets no lower than 60 degrees your chicks will keep warm after they know how to exercise by scratching for their feed; at night it may be necessary to cover a mat over the top of the brooder. On very cold nights I would fill jugs with hot water at bed time and wrap them into cloths to prevent chicks coming in contact with direct heat. I would set these into the front corners inside the brooder. This brooder, with some attention, will take care of from 50 to 75 chicks, and 100 if you arrange the water jug heat to prevent them from crowding. Once more I want to say, keep the chicks dry. Feed mostly dry feed and provide at all times fresh water and grit.

PIEDMONT HEIGHTS FARM.

Albemarle Co., Va.

POULTRY NOTES.

Editor Southern Planter:

In my boyhood days I spent many thoughtful hours trying to solve the vexing problem as to the maternity of the chick. Now the question may be stated thus, Resolved that the incubator is the mother of the chick and the brooder the stepmother, and I may say that some brooders are the "genuine article."

Methods of incubation and brooding have undergone great changes in the past decade, and no one now undertakes to raise chicks in large numbers without the use of incubators and brooders. A great educator said that the proper time to begin to educate a child is by educating its grandmother. This applies with double force to the hatching and rearing of chicks. No incubator can hatch a good strong chick from an infertile egg or a weak germ. The breeding stock must be strong, healthy, vigorous and well fed to produce good, strong vigorous chicks, that will live and thrive. All puny, unthrifty birds should be discarded and the males should be especially strong and vigorous, and much better results will be obtained by allowing but one male with the flock at a time. Where two or more males are kept it is best to keep them confined in roomy pens, where they can be well fed and allow but one to run with the flock each day.

The breeding stock should now be in the pink of condition. Give all the range and exercise possible. Feed liberally of good sound grain and some meat and vegetables. Keep them busy. Gather the eggs

several times during the day to keep them from getting chilled. Keep them in a dark airy room, where the temperature does not go below 50 degrees. Turn them daily. This applies to natural as well as artificial incubation. Select medium sized eggs for hatching and as uniform in size and color as possible. It is not necessary for me to say anything about natural incubation as all are familiar with it, but I want to give a few hints on artificial hatching.

It is very important to have a good incubator. There are many cheap machines on the market. They are a source of disappointment and loss from beginning to end. Get a good incubator and at least two good brooders. Place your incubator in a convenient place, where the temperature is as uniform as possible. Use only good eggs. Use the best grade of oil. Keep your lamps clean. Do not open the doors of the incubator the first three days. Keep the temperature as near 102 degrees as possible the first week. Begin to turn the eggs the morning of the fourth day, and turn them regularly every morning and evening until the evening of the eighteenth day. Increase the temperature to 103 degrees the eighth day. Keep it as near this temperature as possible until the hatch is complete. Cool the eggs ten to thirty minutes every day, when you turn them. Always add moisture on the eighteenth day. I put water in at a temperature of 110 degrees. Test the eggs the sixth day and remove all infertile and doubtful eggs. If an egg shows perfectly clear or shows a round red ring about the size of a silver quarter remove it. Test again on the fifteenth day. Keep the room well ventilated. When the chicks begin to pip or break the shell close the doors of the machine and do not open them under any circumstances until the chicks are all hatched and dry and strong, generally about noon the twenty-second day.

Have your brooders warmed to about 95 degrees and remove the chicks to them. Do not put more than 50 chicks in one brooder. Give them fresh water to drink. Feed them hard boiled eggs chopped fine, shell and all, the first two days, then feed rolled oats or pinhead oats and some finely cracked corn. Keep them warm and dry the first two weeks. Read what my wife and partner says about this and other poultry matters in this issue of the PLANTER.

We have 250 extra good strong chicks from our first hatch, now two weeks old, and have lost less than 2 per cent. Our next hatch of 440 will be out February 26th, and we anticipate a better hatch than the first one. We invite practical questions for this department.

CAL. HUSSELMAN.

Richmond, Va., R. 6.

RATIONS FOR HENS.

I was very much interested in your Poultry Notes in February PLANTER. You give us some valuable information, but unfortunately you give us only a part of the ration you feed your fowls. I would like to know what amount of oats and mash (in the dry state) you feed in addition to the six quarts of corn. Of course I fully appreciate the fact that no hard and fast rule can be laid down in work of this kind, but feel that something more definite could be given as a basis on which to determine what we might expect the best results from. I would appreciate an answer through the PLANTER F. M. ARTHUR.

Philadelphia, Pa.

At this time we are feeding about 10 pounds good clean oats in the morning, 18 to 20 pounds dry bran and shipstuff, equal parts (9 to 10 pounds of each), made into a dry mash, with about 8 quarts sweet skimmed milk, at noon, and 6 to 8 quarts shelled corn at night. Great care is taken to feed only sweet, clean food. Meat scrap and bone is fed every other day. This is a dry mixture, about one-third granulated bone. Guaranteed analysis 65 per cent. protein. Five pounds of this meat and bone is fed every other day. Grit, oyster shell, charcoal and water in self feeders constantly before them. Egg yield now, February 20th, 70 per cent.—C. H.

I see by the February issue of the SOUTHERN PLANTER that you invite questions on poultry raising. I have a flock of chickens that I have kept all winter, and the egg supply has been so small I am ashamed to mention it. There are in the flock several thoroughbred Plymouth Rocks, the others mixed. They are fed well, and on a variety of food—oats, corn, meal, bran, meat scraps, etc., and yet no eggs. What would you advise? I am thinking of getting rid of the whole outfit and starting with a new lot?

Montgomery Co., Va.

E. A. LONG.

These birds may be over fat. I would advise more vegetables, cut clover hay, boiled potatoes in the bran mash, sweet skimmed milk. I would leave out the corn meal and feed very sparingly of whole corn for the evening feed. Scatter all their grain feed in a deep litter of straw, hay or forest leaves. Have this litter six or eight inches deep, so they must work hard for their feed, every grain of it. See that the house is reasonably clean and well ventilated. Feed more oats, wheat screenings, etc., and less corn.—C. H.

If you will mention THE PLANTER when writing to advertisers it will be appreciated.

The Horse.



PERCHERON STALLION.

Buster Brown is now at the head of the stud of Mr. J. F. Lewis, of Lynnwood Stock Farm, Va. He succeeds Bordeaux, 21101, A. P. S. Book, who has weighed over 2,350 pounds. Buster weighed last March when thirty months old 2,108 pounds, and is a fine type of the breed.

SHIRE HORSES.

The English Shire sales opened with a draft from Mr. Cavendish's stud at Holker. Forty mares and colts sold at an average of \$500; five mares sold for \$1,000 or more; Holker Rachael, \$1,300; Fulton Maggie, \$1,150; Holker Marionette, \$1,050; Holker Wisdom, \$1,100; Royal Rose, \$1,000, which shows the high appreciation of Shire mares in England that can raise valuable colts and do good work on the farm. This average of \$500, with so many old mares and young colts shows the high appreciation of draft horse breeding in England. One mare 15 years old sold for \$425, yearling colts sold for \$500 to \$600.

The late Mr. Parnell's Shire sale of 42 head averaged \$455. Rokeby Vanity, a three-year-old filly, sold for \$1,500; the mare, Yatesbury Flower, \$1,400. The only two stallions sold, Rokeby Pretender, two years old, sold for \$2,050, and Birdsall Calamint, \$1,900.

Many in this country think they can buy good English Shire and French stallions for half these prices. At these sales no guarantee is ever given, and American importers get no guarantee, but must

give a strong guarantee with every stallion sold, sell them on long time and then wait a while for the money.

English railways deliver most of their freight in the towns and cities and use more horses than were used before railroads came in to drive out the horses, as it was then supposed they would do. Three English railroads have 5,000 and 6,000 horses each. They pay \$300, the average price for these draft horses, and sell them after six years' work for an average of \$115.

Medals and breeders' cups should be offered as optional to the winner at our leading shows. These evidences of the superiority of the stock we breed is far better than the mere money value. Gold, silver and bronze medals and silver sets are far more popular in Europe than in this country.

You visit a French or Belgian horse breeder and before you are shown the horses the good wife brings out the wine and the medals. Cups and objects d'art adorn the room, a good load of medals are poured out upon the table. *Voi la!* These are the kind of horses we raise. If the breeder gets the money prize that is the end of it.

NOTES.

Some important events have been announced by the Washington Jockey Club to be run off at the approaching spring meeting, taking place at the Benning's race track, March 23d-April 13th. As racing at this point opens the Eastern racing season, the sport at the District of Columbia track has become very popular, and each year there is to be seen quite a gathering of horsemen and horses from California, New Orleans, Hot Springs, Memphis and other points, as well as those that have been in winter quarters. The Club offers this year for two-year-olds the Washington Nursery, with an added value of \$1,000 over four and a half furlongs of the old course, and the Jesse Brown Cup for two-year-olds, bred and foaled in the District of Columbia, Virginia and Maryland, with \$1,000 and a plate of the value of \$250 added. Three events are opened for steeplechasers, and in these Virginia breeders, seeing that we have made such rapid strides in producing that sort, will be especially interested. Probably the most important of these is the Chevy Chase Hunt Handicap, distance about two and a half miles

over the W. J. C. Course, the Liverpool jump being eliminated. The value of this event is \$550 in plate.

I note with pleasure the greatly increased interest in breeding fine draft horses in Virginia, and trust this good work may soon assume important proportions. The State has produced trotters of "Grand Circuit Calibre," while we rank with any part of America, indeed surpassing all others, with the possible exception of Canada, in breeding, developing and showing hunters, jumpers and steeplechasers, so why should we not send forth draft horses of real class. Of the latter Percherons seems to meet with most favor among Virginia breeders, and men like John F. Lewis, of Lynnwood; W. J. Jordan and Sons, of Dublin, Va.; E. B. White, of Leesburg, and others, are producing good ones. The Horse Breeding Association, of Aldie, recently formed, has commenced to import the best Percheron stock, and its officers are: President, F. A. Ish; Secretary, W. I. Zerega; Treasurer and General Manager, Augustus di Zerega.

Wealth, 2:10, the handsome brown son of Gambetta Wilkes and Magnolia, by Norfolk, who heads the stud of W. H. and S. F. Chapman, Gordonsville, Va., was well patronized in 1904, and this big pacer, with his lightning turn of speed, will be favored with good mares during the coming season. His blood lines are of the right sort, because Gambetta Wilkes is a prolific sire of standard speed, and on the maternal side, too, performers and producers loom up in grand array. Wealth's tabulated pedigree may be had of the Messrs. Chapman, and will furnish interesting information.

One of the best known coach teams in the city is the pair of handsome grays owned here for some years past by John P. Branch, of the banking house of Thomas Branch & Co., who thinks highly of them on account of their good looks, docility, manners and size. One is a gelding and other a mare. The latter is called Minnie and was foaled 1890, while the gelding bears the name of Ilderim, and came in 1891. They bear the relationship of half brother and sister. Both horses were bred by Col. W. Miles Cary, of this city. Minnie was sired by Havelok, 5131, son of Princeps, and Ilderim by Signet, 17158, the sire of Bertie, dam of Lamp Girl, 2:09, holder of the record for Virginia bred trotters. The dam of Minnie and Ilderim, a gray mare called L. B. C., is, I learn from Mr. Cary, alive and in vigorous health, though past

twenty years old. L. B. C. was sired by F. F. V., 8282, dam Grey Fan, by Woodchopper, and, I may add, that this same F. F. V., the big gray son of Mambrino Patchen, formerly owned here by O. J. Schoolcraft, and later sold for export to South America, was a very useful sort of a horse, as with limited chances his blood figures in the dams of coachers, roadsters, standard trotters and show horses, among the latter being the crack high jumper Elevator, one of the best known performers on a tan bark ring ever bred in Virginia, and who was sold during the New York Horse Show of 1904 by John Stewart Bryan, of this city, to F. G. Bourne, of New York, for \$1,500.

The forty-fifth annual State Fair of the North Carolina Agricultural Society is announced to come at Raleigh, the State capital, on October 16-21, 1905, and like its predecessors for many years past, is likely to be a grand success. This association is an honor to the "Old North State," and with such officers as the Hon. Ashley Horn, president; Claude B. Denson, treasurer, and Joseph E. Pogue, secretary, its affairs are in true and tried hands.

R. J. Hancock & Son, of the Ellerslie Stud, Charlottesville, Va., report among recent foals, a bay filly by imp. Fatherless, dam Canteby, by Eolus, second dam Calash, Eolian's dam, by imp. Phaeton. The mare will be bred back. Canteby is the property of Dr. Thomas H. Hancock, of Atlanta, Ga., and was bred on shares with James S. Stark, of the Keelona Stud, which adjoins Ellerslie.

Hon. Henry Fairfax, member of the State Corporation Commission of Virginia, and known in Europe and America as a successful breeder of hackneys, is also a breeder of ponies and at far-famed Oak Hill Farm, his breeding establishment, near Aldie, Loudoun county, he has probably the finest herd in Virginia. These ponies include Welsh, Exmoor and native Americans crossed with hackney strains.

The Ellerslie bred mare, Iyllis, II, by imp. Charaxus, dam Elite, by Eolus, recently changed hands at Lexington, Ky., passing from M. D. Richardson to Capt. J. B. Viley, for \$450. She was sold at public auction. The daughter of Charaxus was bred in 1904 to Farraday.

BROAD ROCK

Questions and Answers.

Enquiries should be sent to the office of THE SOUTHERN PLANTER, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

Soy Beans.

I desire to know if we can grow the Soya Bean here? I live in North middle Tennessee, on Highland river.

Can we grow Rape here? Also will Alsike clover grow here? J. F. FREEMAN.

Macon County, Tenn.

Yes, we think you should grow Soy beans in your section. It will be well for you, however, to buy the earliest variety and get them planted in May as they make a long period of growth. You can grow Rape no doubt successfully and also Alsike clover. Both of these crops are produced far North.—Ed.

Preparation for Corn Crop.

I want to make the best acre of corn in Surry county, N. C. Please tell me how to do it? I have a piece of land that is of a red, puffy nature; poor to begin with. Ten years ago it made two barrels of corn. I sowed it in rye and turned the rye under, and sowed peas, turned the peas under and sowed to wheat, turned wheat stubble under and sowed to peas again. Cut the peas and turned the pea stubble under and sowed to wheat (and made 19 1-2 bushels to the acre), grass, timothy and herds grass. It has been in grass five years. I have spread fifteen loads of stable manure and turned the sod eight inches deep, subsoiling with two horses to a double shovel stock, with small bits on to the depth of six inches. What amount of fertilizer and what analysis must I use? How far apart must I put my rows and how far apart the hills in the rows? Give me a plan for a cistern at my barn. Will the water be healthy for my stock? E. J. MILLER.

Carroll County, Va.

You should make a good crop of corn on the land you describe if you will supplement the stable manure with 500 pounds acid phosphate, applied broad cast, to the acre and well worked into the soil before planting and then apply 150 pounds nitrate soda per acre to the crop when you cultivate the second time. We do not think you need to use any potash in your section, but lest this should not be so you might also apply fifty pounds per acre of muriate of potash along with the acid phosphate. Work the soil deep and fine before you plant the corn and cultivate level. In this issue you will find reports on several corn crops giving methods of cultivation. We will try to give a plan for a cistern later. Water gathered from the roof of the barn and stored in the cistern is perfectly wholesome for the stock.—Ed.

Curing and Smoking Hams.

Please give me the best way to cure hams. Does smoking them make them rancid. Some claim that it does. If I should use Krauser's Liquid Extract of Smoke would there be any danger of spoiling, packed in bran through the summer?

Why do people smoke their meat? What effect does it have on it? Does it make it hard or tough?

A SUBSCRIBER.

We always prefer to dry salt hams and bacon. Simply lay them on a board and cover well with salt, both under and above the meat and use with it after the meat has

been in salt for a week or ten days a little saltpeter to improve the color of the meat. They should remain in salt from three weeks to a month, then be hung up to dry or smoke if smoking is desired. Personally we prefer unsmoked meat. Smoking will not make the meat rancid, but tends to keep off insects and gives a flavor to the meat much relished by most people. Krauser's Liquid Extract of Smoke is largely used and we have never heard any complaint about it, but commendation from many. After the meat is thoroughly dry it should be rubbed over with black pepper to keep off flies and should be closely bagged or buried in bran or chaff in a closed chest.—Ed.

Killing Growth of Sassafras, &c., with Fire—Seeding New Land to Grass—Rotting Tobacco Stalks—Sick Calf.

No. 1. I would be glad to know at what season, or in what month fire would be the most likely to kill a growth of briars, pine and sassafras. I have a field grown up with these; some ten or twelve feet high and very thick. Should I cut down the pine now and when they get dry, say April or May, while the sap is up, set fire to the field? Do you think it would kill the sassafras?

No. 2. I would like to know when would be the best time to sow down in grass for permanent pasture a piece of fresh land which was cut down by saw mill company during last year? My intention was to get it coultured and to just harrow the seed in, in April or May without any guano. I have been told by others the land would be too fresh to sow this spring, that I would get no stand. Do you think it would be better to grow a crop of corn or tobacco and sow in the fall, September or October? It is strong land, but rather steep and stumpy. I would rather not use any guano as I cannot run a drill over it, but if put in tobacco first would put some guano under the tobacco.

No. 3. Is there anything that can be sprinkled on tobacco stems and stalks that would help them for guano and also make them rot quick? How would it do to throw on them ashes and lime? In order to have them rot quick should they be kept wet or dry while in bulk?

No. 4. I had a yearling calf while grazing last September, on young clover and wheat stubble to take the scours and to get very poor in four or five days. It seems to eat well but does not improve in condition or flesh. Please advise me what to do for it. RIDGEWAY.

Henry County, Va.

(1.) We doubt very much whether you can kill sassafras by burning at any time. You may destroy the growth above ground but the roots will send out shoots again immediately. The only way to get rid of it is to grub it up or use it as a pasture for angora goats. If they are kept on it long enough they will kill it.

(2.) In this issue you will find advice as to seeding grass for permanent pasture, but we doubt very much whether you can secure a stand of grass on land such as you describe. You should use it for a crop for a year or two and apply manure or fertilizer or both, then you can expect to get a permanent stand. We think you would do better to grow corn rather than tobacco the first year as it is doubtful whether unless you fertilize heavily you can make good tobacco on this land.

(3.) If the stems and stalks are composted with lime it will soon break down the tissue and make them available

for fertilizer. We know of no liquid that you can sprinkle them with except water to hasten the rotting.

(4.) Give the calf about a tablespoonful of blood meal in its feed each day until it begins to thrive and look well. The quantity may be increased somewhat after it has been fed for a week or two to advantage.—Ed.

Poultry Feed.

Do you think sorghum seed and millet seed a good feed for chickens for winter eggs? Also please tell me if you know of any one that hatches chickens to sell right off or not. Do you know where I can buy sun flower seed to plant? Are they good to feed for eggs? H. J. Amherst County, Va.

Both sorghum and millet make good feed for chickens when mixed with corn, wheat and oats, or when fed alternately with these grains. We do not know of any one selling newly hatched chickens; possibly if you write to some of our advertisers they might accommodate you. You can get Sunflower seeds to plant from any of the seed dealers advertising in the Planter. They are said to be good feed for poultry, though we have never tried them.—Ed.

Buckwheat—Maccaroni Wheat.

(1.) Is Buckwheat as good a feed for poultry as other wheat?

(2.) Could I get a good stand of clover by sowing it with Buckwheat in July?

(3.) What is your experience with Macaroni wheat? Does it yield as many bushels per acre as barley? How does it compare with barley for feed? Would you recommend sowing it in this part of the State?

W. M. HEATWOLE.

Rockingham County, Va.

(1.) Buckwheat makes good feed for chickens fed alternately or mixed with wheat or corn, but should not be relied upon alone for a constant feed.

(2.) You might possibly get a stand of clover sown with buckwheat if the buckwheat was sown thin, but if the crop be at all heavy it will smother out the clover.

(3.) Macaroni wheat has not been, so far as we know, experimented with in the South. It is recommended for growth in the dry sections of the North and West. How far it would succeed here remains to be seen. We should not sow it except in a very small way as an experiment as we doubt whether you can sell it here at all. It is so hard that millers will not touch it as a rule. In the section where it is being grown mills are being specially made to grind it and the men owning these mills are the buyers of it. It is said that mixed with other grains it will make good feed for stock, but we have no definite data on this subject as yet.—Ed.

Alfalfa.

I have a field of sandy land, upon which I had a heavy crop of Soy beans last year four and four and a half feet high, sowed broadcast. Now have it in wheat. I want to seed it to alfalfa next September. How would it be to sow in March about 500 or 600 pounds agricultural lime to the acre? Would I have to lime it again before sowing to alfalfa or would the one application do for both crops? By answering the above in March issue you will oblige.

Surry County, Va.

JACOB McELROY.

If you apply the lime on the wheat now it will be good for the alfalfa proposed to be sown in the fall. We would

spread the lime broad cast on the wheat, then run a harrow over it and mix it with the soil. This makes it more available for the wheat crop and the harrowing will help the wheat.—Ed.

Hen Manure.

Please give best way of applying hen manure on corn or grass land and oblige?

SUBSCRIBER.

Warren County, Va.

In one of the replies to inquirers in this issue you will find our advice as to using hen manure on corn or other crops. Alone it is a one-sided fertilizer, and to be profitably used requires to be mixed with phosphoric acid and potash.—Ed.

Permanent Pasture.

I have a piece of land I wish to make a permanent pasture. It is poor and rolling, medium clay bottom soil. Please advise me what to sow it in, and also the quantity to sow to the acre. Must I sow it this spring or next fall? J. G. Isle of Wight County, Va.

It is no use to attempt to make a permanent pasture out of poor clay soil. What you should do is to grow peas or other leguminous crops upon it and help them with some acid phosphate until you have gotten the soil into a good condition. Fall is the best time of the year to sow grass. See our notes on grass seeding in "Work for the Month" in this issue.—Ed.

Corn Breeding—Barren Constalks—Corn Crop.

Please let us hear from you in your March issue, in regard to Prof. P. G. Holdin's method of selecting and cultivating corn. Also what causes barren stalks of corn? How to avoid same? Is it manner of cultivating, variety of corn or what? We used the cultivator and weeder, the seed was a nondescript. We have a small lot, that's been cultivated in Irish potatoes and clover for several years; it is a deep, rich, dark gray, loamy soil, and lies level, that we wish to put in corn and we would like to know what variety would make the greatest yield and no barren stalks if possible, and where to procure same.

Pittsylvania County, Va.

CARTER SPRING CO.

At several of the experiment stations work is being done in the selection and breeding of corn and is having a wonderful effect. To be effective the selection of the ears should be made in the field during growth, taking only for seed the ears from stalks carrying at least two ears. If the desire is to reduce the height of the corn select the lowest ear on one stalk. After these ears have been selected they should be carefully dried and then in the spring grains should be taken from different parts of the ear and germinating tests be made and only seeds from those ears should be planted which show at least 90 per cent. of germinating power. To be effective this system of selecting and the germinating test should be carried out each year as the corn is apt to run back again in productive capacity unless this is done. Barren stalks in the field are largely caused by permitting barren stalks to pollenize the other stalks in the field. To prevent this every barren stalk should either be cut out and fed to stock before the tassel forms or the tassel be cut off before the pollen forms. If this practice is followed carefully every year the barren stalks will soon be noticable by their absence. In this issue you will find several advertisements from parties who have given attention to the breeding and selection of

corn and it will be well for you to purchase seed from some of these parties and give it a trial on the piece of land you mention. While it may not produce the heaviest yield possible the first year, yet the seed being carefully selected from it the next year's yield should be greatly increased. Corn requires time to become acclimatized to a locality before it will make the best yield possible in that section.—Ed.

Horse Rubbing His Tail.

Will you be kind enough to answer in your paper the cause of a horse rubbing his tail in the stable and what to do for it? A SUBSCRIBER.

The probable cause of the horse rubbing his tail is the presence of a small parasite which causes the itching. Make a solution of tobacco one and a half ounces to two pints of water boiled together and rub this on the tail several times at intervals for about fifteen days. This will kill the parasite.—Ed.

Raw Bone Meal vs. Steamed Bone.

Will you kindly inform me what is the difference in value of raw bone meal and steamed bone meal of like analysis? Also the difference in the effects of the two upon the crops and lands upon which they are used.

Pittsylvania County, Va.

RUFUS CARTER.

Raw bone meal has usually from four to five per cent. of nitrogen derived from the fat and sinewy matter on the bone, while the steamed bone has practically nothing but phosphoric acid as its valuable constituent. The phosphoric acid in the steamed bone is more available than in the raw bone meal, therefore, where bone is used for the phosphoric acid alone steamed bone is preferable to raw bone meal.—Ed.

Nitrate of Soda—Market for Lambs.

1. I see you recommend nitrate of soda for top dressing crimson clover. Where can it be purchased? At what cost? and what time should it be applied? Would nitrate of soda be also the best top dressing for red top clover?

2. Where is the best market for early or spring lambs? At what age should they be marketed for best profit? Can you give me address of some reliable parties to ship lambs to in Washington, D. C., or do you know of a better market? If so give address of some good parties.

Surry County, Va.

OTHO M. COCKES.

1. You will find nitrate of soda advertised by several parties in the current issue of the Planter. Write for quotations, the price varies. Apply as a top dressing when the crop commences to grow and it will help the crimson clover very materially.

2. Washington, D. C., is a good market for early spring lambs as are also Baltimore, Boston, Philadelphia and New York. Ship as soon as they weigh from thirty to forty pounds. Golden, Love & Co., Washington, are reliable commission men.—Ed.

Preparing for Alfalfa.

1. I have a piece of land which I want to sow to alfalfa next September. Am manuring the land now from stable, for Irish potatoes. The land had same manuring and same crop last year. Has never been limed. Would you advise to lime now and work in with manure, or wait till September, when I prepare land for alfalfa seed?

2. I have an acre in clover sod, plowed in December last. Want to harrow well in April; give good dressing of manure, harrow same and plow it in. Harrow again and

plant to corn. I learn from you that manure is not well balanced of itself. I have used a fertilizer containing eight per cent. Phosphoric acid and four of potash. Will this do to balance the manure if sown and worked well into the soil? Land is stiff. Clay is about ten inches from top.

3. Would like to know what fertilizer to use on sweet potatoes? I have used manure heretofore but have none for this year. Land was sown to peas last June. Picked some and turned down good crop of vines last fall.

New Kent County, Va.

S. C. TUNSTALL.

1. Do not apply the lime until next September when you prepare the land for alfalfa.

2. An application of the fertilizer you name, of say from 300 to 500 pounds to the acre, will help to balance the manure for the corn crop. Sow broad cast and work well into the soil.

3. To make a fertilizer for sweet potatoes mix 150 pounds nitrate soda, 350 pounds acid phosphate and 150 pounds muriate of potash. Apply this quantity per acre.—Ed.

Fertilizer for Tomatoes and Cucumbers.

I would like some advice about what would be the best fertilizer for tomatoes and cucumbers on a medium sandy loam soil. I am going to grow for the H. J. Heinz Co., Williamsburg. I would like to get barnyard manure but I am not certain about getting it and will have to use some other fertilizer instead.

ALEX. GLENESK.

James City County, Va.

In the February issue you will find a formula for a fertilizer for cucumbers and tomatoes on page 107. Later we shall have more to say on the fertilizer necessary for these crops.—Ed.

Currants—Blackberries—Land Plaster.

1. Do you think currants will do well in this county (Albemarle)?

2. What kind of blackberries do best here, the Rathbun, Eldorado or the Wilson?

3. I have a piece of sod land I want to put in corn this year. Do you think good land plaster will do as well as lime to top dress the plowed ground with? SUBSCRIBER.

Albemarle County, Va.

1. Currants should grow successfully on high land in your county. They will not do anything in the eastern section of the State.

2. Snyder, Kittatinny, Early Harvest and the Britain are the best blackberries for your section. The Eldorado may succeed but we do not know about the Rathbun or Wilson.

3. We would not advise you to use land plaster on the corn land, use common lime. Plaster is most uncertain in its action and we have had many complaints from parties who have used it. It will not act unless there be plenty of available potash in the soil.—Ed.

Lime Manuring for Corn.

1. I see you advise the use of lime on land intended for corn. Do you mean Agricultural lime? If so, where do you get it and what does it cost a ton?

2. I have a lot of farm pen manure that I want to use on my corn land. Would you put it on now or would you put it on after breaking the land? I think it would put it in the ground too deep to put it on before breaking as I want to break it deep and replot it before planting. In replotting would I get it mixed with the soil or would it be down too low in the soil? A READER.

Haitas County, Va.

1. Use common lime from the kiln on your corn land. Write to Mr. T. O. Sandy, Burkeville, Va., for quotations.

He is supplying it at points on the Northern and Western and Southern Railway at \$3.00 per ton.

2. Farm manure applied on the top of the sod and plowed under usually tells well on the corn crop. However, as you intend to replot the land before planting you might apply it after the first plowing and then cover it when re-plowing and we have no doubt but that you will get good results.
—Ed.

Pasturage for Goats.

I would like to have your advice in your next issue relative to running angora goats on a mountain tract where the principal growth is ivy or mountain laurel. I have had cattle to die from eating it.

ROGER H. BAYLY.

Fauquier County, Va.

1. While goats can eat almost anything without injuring them and will eat tobacco and it does not seem to do them any harm and it is said that tin cans do not seem to disagree with them yet we should hesitate to confine them on a pasture of mountain laurel or ivy which is poisonous to all animals so far as we know.—Ed.

Poultry House—Blackeye Peas.

1. Please give me a good plan for building a poultry house. Should the hens nests be made outside or inside of the poultry house? Should not a light be provided to ventilate the house and also to afford light in severe weather without undue exposure?

2. Can the "Black Eye Pea, so successfully cultivated in Eastern Virginia be grown in the clayey soil of Southwest Virginia? I notice that none of the farmers here raise them. I tried them last year, planting my peas in the latter part of June. They grew to an almost fabulous height, but frost coming the fifteenth of September killed them before a single bloom had appeared.

A. A. B.

Grayson County.

1. We will try to publish a plan of a hen house shortly. In our last issue you will find the kind of one advised by a correspondent. Make the nests inside the hen house. In most cases in Virginia sadly too much ventilation is provided in hen houses. An old shed or even a tree being thought good enough for them to roost in. If you build a good house, of course, provide for ventilation in the summer, but not much is needed in winter. The house ought to have windows in the South so as to admit the sun during the cold months and in the summer the windows should be thrown open and a wire shutter be substituted.

2. We think you should be able to grow Black eye peas in Southwest Virginia. Plant as early in May as possible. The land should be warm before planting the seed as they are apt to rot in cold soil. Probably for the first year or two you will not be able to gather a heavy crop of ripe peas, but if you save the seed of your own raising they will adapt themselves to the climate in the course of a year or two. Cow peas are sensitive to local climate conditions for growth and should always be raised in or near the locality where the seed was grown for the best results.—Ed.

Peanuts—Beets—Horse Eating Dung—Cultivation of Corn—Deep Plowing.

1. What are the best kind of peanuts to plant for a salable crop, also what kind of a fertilizer to use, and how much per acre?

2. What time should best seed be sown, and the plants

set, to get them in market by the last of May and first of June? What kind of fertilizer is best for growing the crop? Where can I get shipping crates for them?

3. What causes some horses to eat their dung? My horse eats his dung and I can't keep him fat? Give remedy.

4. I live in the "Tide Water Section" of North Carolina. The land is low and medium black. My neighbors say if I broke my land deep like the Planter advises it will "kill" it. Is this so?

5. We plow up a row about eight inches high to plant corn on. Then we "scrape" it off, and "weed" it, then we "side" it up with a cotton plow; then we "hill" it with the "Champion" plow, made by C. Billups Sons of Norfolk, Va., leaving a large row to the corn. By the time we get ready to "hill" it the rootlets have met in the rows or "middles," and when we "hill" it we turn up a roll of the roots from one end of the row to the other. Could we work the land flat, with the cultivator, in this section, and not disturb the rootlets and get a better yield? We sow peas at last working. We get about four or five barrels per acre.

6. Will peanuts improve land?

H. S. SWAIN.

North Carolina.

1. Virginia peanuts in this State make the best and most salable crop. A proper fertilizer to supply sufficient nitrogen phosphoric acid and potash to make a crop of sixty bushels of peanuts to the acre, can be made of 300 pounds cotton seed meal, eighty pounds acid phosphate and 240 pounds kainit. Lime should be applied to the land at the rate of fifteen bushels to the acre to be worked in before applying the fertilizer.

2. Beet seed should be sown in April and May. In our last issue will be found advice as to fertilizer to be used. You can get shipping crates for them from the Southside Manufacturing Company, Petersburg and P. L. Banks and T. C. Andrews & Co., Norfolk.

3. The cause of depraved appetite in the horse is obscure, usually it is an indication that they need something not found in the food fed to them. Change the rations you are feeding and especially give some little salt with the changed rations. Tie up the horse so that he cannot get to the dung.

4. If you will gradually break your land deeper, one or two inches each year until you get it broken to the depth of ten or twelve inches you will find it will be much more productive. If you turn up six or eight inches of the subsoil all at once it will not be as productive for a year or two until this new soil is thoroughly aerated.

5. Abandon the old fashioned method of cultivating the corn crop which you describe and work the soil deep and fine before planting, then work the land level with a cultivator and never put a plow into the field after the corn is planted. In this issue you will find a report of an excellent crop of corn made in this way.

6. Peanuts being legumes add nitrogen to the soil, but require phosphoric acid and potash to be applied in order that permanent improvement may be made to the land.
—Ed.

Crimson Clover.

Have a fine stand of crimson clover sowed in August. What is best for top dressing and when should it be applied?

J. L. SMITH.

Give a top dressing of 100 pounds of nitrate of soda per acre as soon as the crimson clover commences to grow freely.—Ed.

Summer Pasture.

I have five acres of light sandy land. What will be the best kind of grass for me to plant in it for a summer pasture?
 ROBERT CLARKE.

Neoberne, Ala.

You can seed no grass that will make a summer pasture this year. The best way to make a pasture of this land will be to sow cow peas or cow peas and sorghum in May.
 —Ed.

Sorghum or Millet—Pearl Millet—Crimson Clover.

1. Which would you advise sowing after peas and oats, say during first half of July, sorghum, German millet, or Pearl millet? Sorghum does well sown in June. I have never tried any kind of millet.

2. Is the Pearl millet so much a head of the German as most seedsmen claim for it, that is for hay?

Would crimson clover sown in corn at last working, early in July, make sufficient growth to benefit the land when turned under for oats, the latter part of March or early in April?
 SUBSCRIBER.

Keenan, W. Va.

1. Either sorghum or millet can be sowed successfully after the oats in July, though probably the millet will do better than the sorghum at that time.

2. Pearl millet makes on good land a heavy yield of hay, but we do not know that it is much preferable to the Southern grown German millet in this respect. They are both good for cutting for hay before the seed forms.

3. Yes.—Ed.

Velvet Beans—Chicken Manure.

1. Will velvet beans ripen here if sown the first of May and are they a better land improver than cow peas?

2. We have a quantity of chicken manure saved carefully in barrels. How can we use it on a corn crop, to go farthest and bring best results? Should it be applied before or after planting?
 A. A. WOOD.

Dinwiddie County, Va.

1. Velvet beans will not ripen their seed anywhere in Virginia. They make a heavy growth and will greatly improve the land when turned under in the early winter after they have died down, but it is doubtful whether in this State they are better for this purpose than cow peas.

2. The chicken manure will require acid phosphate and potash to be mixed with it in order to make it a balanced manure for corn. Use 300 pounds of acid phosphate and fifty pounds muriate of potash with the chicken manure and apply this mixture in the row after opening it for corn. Mix it well with the soil by running the cultivator through the row before planting the corn.—Ed.

Nitro Culture.

1. What do you think of the "Nitro-Culture" as advertised by some seedsmen for all crops? Will it pay the farmers to purchase this "Nitro-Culture," and use it on all crops, especially the beginner?

2. Does the United States Department of Agriculture furnish this bacteria in any quantity free?

3. I sowed a piece of alfalfa last fall and failed to secure a good stand. Can I reseed this in spring or had I better plow and sow down in peas and reseed in fall?
 SUBSCRIBER.

Davidson County, N. C.

1. Nitro-culture will be found very effective in growing the leguminous crops and with a successful growth of these other crops will be benefited, but it is essential for securing successful growth that there should be also a suf-

ficient supply of the mineral fertilizers, phosphorous and potash in the soil as the nitro-culture will not supply this need.

2. The United States Department of Agriculture furnishes a limited quantity of the bacteria free.

3. We would advise that you plow up the alfalfa, which has failed to make a stand and sow cow peas, giving them 300 to 400 pounds of acid phosphate per acre, cut them for hay, then work the land with a disc cultivator so as not to bring up the weed seeds from below and apply ten bushels of lime to the acre, then seed with alfalfa in August, using the bacteria to inoculate the seed at the time of the sowing.—Ed.

Rabbits Barking Fruit Trees.

The best and cheapest way to prevent rabbits injuring trees is to take some corn stalks and set up around the tree and tie at bottom and top with twine. Just one thickness of the stalk will serve the purpose.
 W. G.

Fluvanna County, Va.

Lice on Cattle.

Please advise me how to destroy lice on cattle?

Fairfax County, Va.

J. W. MAKELY.

Use Laidlaws Dip advertised in the Planter or Zenoleum also advertised. There are also a number of other lice destroyers which you will find advertised.—Ed.

Nitro Culture.

Would like to see an article on Nitro Culture. What do you think of it?
 SUBSCRIBER.

See page 8 of the January issue of the Planter.—Ed.

Artichokes.

I wish you would give me some instructions with reference to planting artichokes. Are they planted whole or can they be cut like Irish potatoes? Also what amount is required to plant an acre?
 R. L. P.

Robertson County, Tenn.

See our article on Work for the Month in this issue.—Ed.

Bermuda Grass Roots.

Can you tell me where I can get Bermuda grass roots for planting this spring?
 CHARLES McCULLOCH.

Albemarle County, Va.

T. W. Wood & Sons, of this city, seedsmen, supply them.
 —Ed.

Corn Crop—Tamworth Hogs—Hops.

Thanks to you and Mr. Massie's wise suggestions. I was able to raise upwards of 400 bushels of yellow dent corn on upland with very inferior help. A few years ago one-half of that amount would have been considered a big crop.

In reply to your subscriber about the Tamworth hogs, I am pleased to say I have found them to be the Ne-plus-ultra hog for Virginia.

In reply to a former question about raising hops in Virginia, I would say Mr. Robert Portner, of Alexandria, Va., found them to mould, hence they proved a failure, our climate being too moist.
 J. C. JACOBS.

Chesterfield County, Va.

Preserving Eggs.

Give me a safe plan for keeping eggs twelve months.

Prince Edw. County, Va.

B. L. JORDAN.

Put them when fresh laid in a solution of Water glass (Silicate of soda). You can buy the Water glass at the drug stores.—Ed.

Alfalfa.

The soil is chocolate, with red clay subsoil and was in corn last year. After preparing it thoroughly with lime, will bone meal and phosphate drilled in with inoculated seed be all the fertilizer necessary or should there be any other preparation before seeding. How much seed per acre is necessary to insure a good stand? There are about four acres in the plot. If planted early and kept down by mowing would it injure the stand to take one crop of hay off in the fall, say September? B. S. HORNE.

Albemarle County, Va.

After the lime has been thoroughly worked into the land, then apply the bone meal broadcast or a mixture of bone meal and acid phosphate and work in. Then sow the inoculated seed, twenty-five pounds to the acre—harrow in lightly and roll. If planted early and clipped off two or three times when a few inches high a single crop may be cut for hay in the fall without injury.—Ed.

Seeding to Grass.

I have about three acres that I want to put into grass. It is not a bottom and is not very high. Please tell me what kind of seed to sow? It is a stiff white clay land, but have got it in very good fix. W. C. HENDERSON.

Chatham County, N. C.

In the February and this month's issue you will find advice about grass seeding.—Ed.

Nitrate of Soda.

Is it best to mix the nitrate of soda with the other fertilizers at planting time for Irish potatoes and other quick growing vegetables, or apply later as a top dressing.

Haiti County, Va.

R. E. TOWNSEND.

On quick growing crops part of the nitrate of soda may be used at planting, but we would reserve the larger part for top dressing after the growth has fairly started.—Ed.

Whitewash.

Please give in your next issue the best formula for making "white wash" for outside buildings. ALBEMARLE.

Slake half a bushel of good, fresh lime in boiling water, keeping it covered during the process. Strain it and add a peck of salt dissolved in water, three pounds of ground rice boiled to a thin paste, half a pound of powdered Spanish whiting and a pound of clear glue dissolved in warm water. Mix these well together, and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace, and put on as hot as possible. This wash is nearly as durable as paint on wood or stone in the open air.—Ed.

Hen House Manure.

I have several tons of "hen house manure" under shelter and been using plaster over top of it. I want to ask, through the columns of the Planter the best way to use it on corn or peanuts, and if it is better to mix other ingredients with it, the kind and quality? I say corn and peanuts because they are my principal crops. Any information in regard to applying it to trucks would also be appreciated.

Southampton County, Va.

P. J. HOLMES.

Hen manure is mainly rich in nitrogen. It is deficient in phosphoric acid and potash. It should therefore be supplemented by acid phosphate and muriate of potash for any crop. A mixture of thirty pounds of hen manure, sixteen pounds acid phosphate and eight pounds muriate will carry about 1.25 per cent. of nitrogen, 4.5 per cent. of phosphoric acid and two per cent. potash, used at the rate of two tons

per acre, a mixture in these proportions would furnish fifty pounds nitrogen, 185 pounds phosphoric acid and 80 pounds potash. In the answers to enquiries you will find formula for making a peanut fertilizer. You may when making up this formula substitute the hen house manure for the nitrate of soda. Phosphoric acid is the main requirement of the corn crop, therefore if hen manure is used on this crop to supply nitrogen you should supplement it with 300 pounds of acid phosphate per acre. It will be found a useful fertilizer for vegetables when supplemented with plenty of potash and a smaller quantity of acid phosphate.—Ed.

Mare Sick.

I have a fine mare that was shipped here from the West about a year ago. She has gotten so thin that she is disabled for work. Could you give me some information whereby she may gain flesh again? Can you give me a cure for the "whites?"

North Carolina.

M. E. CANSLER.

Most animals like most men, suffer more or less for a considerable time when changed from one climate to another. Nearly all horses brought into the South from the West suffer to a greater or less degree for a year or two after coming here. Some never get over the change, others recuperate quickly. Evidently your mare is one upon which the climate has had a serious effect. If she be also suffering from the "whites" this will aggravate her case. The first thing to be done is to get rid of the "whites." The womb should be thoroughly washed out with warm water passed into it through a rubber tube. Continue the washing until the water comes out clean. Then inject through the tube an astringent antiseptic injection made up of carbolic acid, two teaspoonfuls, tannic acid, one half dram and water one quart. This may be repeated two or three times a day. Give sulphate of iron three drams daily in the food or as a drench. Feed good sound oats and bran in moderate quantity daily, with good cured clean hay. The object should be to give easily digested nutritive food. If the food does not seem to be taken with relish after ceasing to use the sulphate of iron give an alkaline tonic daily, made up of baking soda, powdered ginger and powdered gentian in equal parts. Mix thoroughly and give in heaping tablespoonful doses twice a day before feeding. It is best given as a drench in a pint of water.—Ed.

Fertilizer for Truck Crops—Tomatoes.

Will you kindly give me your opinion as to the best commercial fertilizers to use on the following named plants, and amount per acre: English peas, onions, Lima beans, pole and bush beans, cabbage, tomatoes, cauliflower, egg plant, pepper, sweet corn and sweet potatoes and cucumbers? Also which you think best varieties of tomatoes for very early fruit, and best variety of onions to grow to large ones in one season. Would you advise Northern or Southern grown seeds for this section.

Rockingham Co., Va.

W. F. BERRY.

In our article on Work for the Month for the Garden, in each issue, you will find advice as to the fertilizers to be used on the several truck crops you name. Spark's Earliana is said to be one of the best and earliest tomatoes. The Queen or Pearl is one of the best varieties of onions to grow. It is difficult to get Southern grown seed for many of the crops named. Where they can be had they usually do well. The Northern grown seed usually does very well.—Ed.

Soil—Gooseberries.

Please be so kind as to inform me, through the columns of the SOUTHERN PLANTER, the variety of soil and gooseberries you would advise for market raising in this locality?
Essex Co., Va. C. C. WARNER.

In this issue you will find a short article on gooseberries. We have never seen them successfully grown in the South outside of the mountain sections, and would not advise planting them except experimentally in your section.—Ed.

Seeding Grass with Cow Peas.

Can clover and Herds grass be seeded with peas in spring with any chance of success? If so, at what time should the seeding be done, and what time should the peas be cut for hay?
Charlotte Co., Va. SUBSCRIBER.

No. Grass when sown in the spring should be sown not later than March, and cow peas cannot be seeded with any prospect of success till May.—Ed.

Salleroi Geranium.

Where can I get Madame Salleroi Geranium.
Aibemarie Co., Va. Mrs. S. C. McDowell.
Most florists and seedsmen will supply this geranium.—Ed.

Toulouse Geese.

Please advise as to raising Toulouse geese. How many feathers could reasonably be expected per goose in one year? How many times could they be picked? How many eggs does a Toulouse goose generally lay?
Amherst Co., Va. M. J.

Toulouse geese like all the other breeds of geese, will naturally find their own food on a farm. They will graze like sheep or cattle on a good grass pasture, and need but little grain or care. A gander should be run with two or three geese. The first laying of eggs should be set under hens, and the goose will then soon lay again. Usually she lays when treated in this way three settings of eggs, say about 40 per year. She should hatch the last setting herself. Each goose will produce about one pound of feathers per year. They are usually picked twice.—Ed.

Cement Wall.

Tell me if I put up a dry rock wall five feet high and fifteen feet long and three feet thick, how many barrels of cement will it take to fill up the spaces between the rocks mixed with sand.
S. S. SMITH.
Culpeper Co., Va.

It is impossible for us to make any estimate on this, as it entirely depends upon how close the rocks fit together. The best way would be to have the cement and sand mixed together dry in the proportion of one cement to three of clean sand, and then to make a mortar of sufficient of this to fill up the cracks fairly as each layer of rock is put on the wall.—Ed.

Hay Crop—Corn Land.

1. In the summer of 1903 I sowed 25 acres of timothy and red top. I had a fine seed bed, and used 200 pounds of local fertilizer to the acre. Summer of 1904 I cut about three-fourths ton hay per acre. The field is a sandy loam. What would be the proper dressing for the field this spring to make a good yield of hay? There is a good sod. Would 100 pounds of nitrate of soda to the acre be a good dressing? If so, what would be about the cost of the soda?

2. What is acid phosphate?

3. I have a field I want to put in corn. It had a good stand of red clover last summer, which I was compelled to pasture close. My idea is to plant in yellow corn and sow cow peas at last cultivation, and then turn cow peas down and seed in winter oats. In the spring sow red clover. Would you advise such procedure. I have in charge a run down farm with naturally good soil, and am trying to get it up. We have introduced the soiling system for all stock. Put in 120 ton silo and want to get 30 acres of alfalfa seeded in the near future. We can grow alfalfa here all right. I have several acres doing finely.

4. Have the Angus cattle any white on them.

St. Mary's Co., Md.

H. J. BUHRMAN.

1. Yes. Nitrate of soda is the best thing you can apply as a top dressing. Use 100 or 150 pounds to the acre. Apply when the grass commences to grow freely, and when the grass is dry. Nitrate of soda generally runs from \$45 to \$48 per ton. You will find it advertised in this issue. Write for quotations.

2. Acid phosphate is the phosphate rock from South Carolina or Tennessee dissolved with sulphuric acid to render the phosphoric acid immediately available.

3. The plan suggested is right. Though if we wanted to secure a clover or grass stand we would sow clover and grass alone without the oat crop as soon as the corn was out of the way, and the land could be prepared. We would give the land a dressing of 300 or 400 pounds of acid phosphate per acre before planting the corn. This would help the corn and ensure a heavy pea crop to turn down.

4. The Angus cattle are all black.—Ed.

Preparing Land for Wheat—Reclaiming Grown Up Land.

1. I have about eight acres of land that was in corn last year, that I want to sow in peas this year for hay and follow in fall with wheat. It is fairly good land. How would you advise fertilizing the peas—I, e., how much per acre, and what analysis?

2. I have a field of about ten acres that has not been in cultivation for several years, and young pines and "broom sedge or broom grass" has got a good start to grow. I am now cutting down the pines and will plow the sedge under with two-horse plow as soon as land thaws, as it is frozen now so I can't plow. The pines I will throw back on plowed land, and burn when dry. Please advise the best way to get this land in shape for wheat next fall?

Rockingham Co., N. C.

A. A. B.

1. Apply 300 pounds acid phosphate per acre, broadcast, to the land to be planted in peas. This should secure a heavy growth to cut for hay. Leave a good stubble on the land, which turn under for the wheat crop.

2. After you have cleaned up the land apply 300 pounds acid phosphate, broadcast, and sow the peas. If the crop is a heavy one, cut it for hay, leaving a good stubble, which plow under for wheat, but if only a light crop, as is quite probable, plow the whole crop under as a preparation for the wheat crop, and apply 400 pounds, one-half acid phosphate and one-half bone meal. This can be put on either broadcast or drilled with the wheat.—Ed.

Tamworth Geese.

In our last issue we inadvertently stated that Tamworths were not bred in this State. This reply has brought us a number of letters from breeders of this hog in the South. J. C. Graves, of Barboursville, Va., advertises them in this issue. Hon. G. W. Barbour, of Somerset, and G. C. Jacobs, Beach, Va., also have the breed. Mr. Jacobs says they have found them well adapted for the South. Ewell Farm, Maury, Tenn., also breeds Tamworths.—Ed.

Miscellaneous.

VIRGINIA AT THE ST. LOUIS EXPOSITION.

Virginia's exhibit at the St. Louis Fair has opened the eyes of the world to the vast resources of this State, and to its importance as an agricultural section, and a manufacturing centre. The Old Dominion, in competition with the most progressive and wealthiest sections of these United States, carried off one of the four grand prizes awarded to agricultural exhibits, ranking with the three States that had appropriations in comparison with which the money expended by Virginia was an insignificant sum. One of the three other States securing a grand prize had an appropriation of a million dollars, the other two had appropriations of a quarter of a million each. Virginia's appropriation was fifty thousand dollars.

Yet with this sum, most judiciously expended by Commissioners Koener, Bowman and Patton, Virginia surpassed the other States of this Union, a dozen of which had appropriations from \$100,000 to \$2,000,000. The grand prize awarded to this State means that Virginia ranked with the best, was equalled by only three, and was surpassed by none.

The total number of medals won by Virginia was 83—gold, silver and bronze. Her agricultural, horticultural, mineral and game exhibits all won gold medals. The forestry exhibits received a silver medal. In addition to the medals awarded the State exhibits, there were three first prizes won by the displays of individual exhibitors, these being those of the Brown Log Cabin Tobacco Company, the Richmond Cedar Works, and T. W. Wood & Sons.

AWARDS TO VIRGINIA.

Virginia State Commission, on general agricultural products, grand prize.

W. A. Brown Tobacco Company, Martinsville, grand prize.

Wood & Son, cow pea exhibit, grand prize.

Cardwell Machine Co., Richmond, tobacco, gold medal.

Hancock Bros. & Co., Lynchburg, tobacco, gold medal.

State of Virginia, tobacco, gold medal.

Sparrow & Grovelly Tobacco Co., Martinsville, tobacco, silver medal.

Henry County Tobacco Co., Martinsville, tobacco, silver medal.

C. R. Sanderson, Ashley, tobacco, bronze medal.

Virginia State Commission, on corn exhibit, gold medal.

The Bain Peanut Company, Suffolk, peanuts, gold medal.

Bosman & Lehman Company, Norfolk, peanuts, gold medal.

The Gwaltney-Bunkley Peanut Company, Smithfield, peanuts, gold medal.

Virginia State Commission, watermelons, gold medal.

Virginia State Commission, on collective exhibit forestry, fish and game, silver medal; game exhibit, gold medal.

Norfolk Storage Co., Norfolk, peanuts, silver medal.

The Norfolk Virginia Peanut Co., peanuts, silver medal.

Suffolk Peanut Co., Suffolk, peanuts, silver medal.

Norfolk city, bronze medal.

Southern Produce Co., twelve varieties of strawberries, four varieties peas, one cabbage, two squash, two cucumber, two asparagus, lettuce reproduced in wax.

Group 90.

The Richardson Pickling Co., Inc., Fredericksburg, pickles, gold medal.

Mrs. Benjamin Harrison, Petersburg, pickles, silver medal.

Oyster exhibit, silver medal.

Virginia State Commission, one gold medal on collective exhibit on minerals.

Virginia State Commission, one silver medal on collective exhibit on minerals.

Virginia State Commission, one gold medal on coke and coal, collective.

One gold medal, Stonega Coke & Coal Co.

One silver medal, Norton Coal Co.

One silver medal, Nye Lithia water.

One bronze medal, Blue Ridge water.

The list of winners of medals in the Fruit exhibits will be found in our Garden and Orchard Departments.

A bronze medal from the greatest World's Fair that has ever been held should be highly appreciated, for many very fine exhibits received no medals. Many of the exhibits that were awarded a bronze medal would have been given a gold medal had the exhibit been in larger quantity. Under the rules a certain quantity was required to receive a gold medal.

Four car loads of the Virginia exhibits were returned to Richmond, and have been stored until they can be installed in the old Hall of the House of Delegates, which has been set apart for a museum in connection with the Department of Agriculture of the State.

THE LABOR QUESTION.

Editor Southern Planter:

This is a vital question to every farmer in the State, if not to every farmer in the country. The cry comes up from almost every State in the Union "for more laborers for the farm." Many suggestions have been made from time to time by different writers looking to the solution of this question, most of their plans are schemes to entice laborers from some other section of the United States to theirs. This is not right in principle nor is it the true solution of the question, it is the same thing as my holding out higher wages to my neighbors hired man to induce him to quit his service and come to me. A good physician tries to get at the cause of the disease, so let us look for the reason why farm labor is scarce. It is due doubtless to the better wages and shorter hours for work offered by the factories and shops in the large cities, connected with the glamor of city life to the country lad be he white or colored; thus it is the trend of farm labor is towards the city. How and where are we to get more laborers for the farm?

The only answer is we must get them from other countries. But a lion stands in the way in the form of a statute passed by Congress about 1872 prohibiting, under heavy penalties, the importation of laborers from other countries under contract to labor in the United States.

No harm can arise from bringing any number of laborers from any of the old countries provided they be distributed through the farming sections and not be allowed to congregate in the cities; the idle and criminal class don't love the country, but prefer the cities where they can work just enough to hide their real calling and depredate with less fear of detection. The idea is this, say if in my locality there are wanted fifty good able bodied laborers to work on the farm, let the owners of the farms come together and appoint one of their number as an agent to go to some foreign country and look around. See the environment of the laborer, find out his character and fitness for the work; after being satisfied as to these things he will then be in a position to make terms as to a years service upon the farm here.

There are a plenty of good, honest laborers in the European countries who would be glad to come if location and wages were agreed on before hand. As a rule the right kind of man with a family dependent upon him won't leave a certain wage and home, no matter how humble, unless he has something ahead, to take the chances over here, consequently a great many come to this country who are merely adven-

turers from the cities abroad, and as soon as admitted congregate in our cities and if they can't get work at once drift into the criminal class.

No doubt Russia would be willing to send us many millions of her working people to-day; give them the rights of an American citizen and fair wages they would go a great way in settling the labor question here.

Labor is not very scarce in this section of the State, but we have not as many laborers, for hire as there were some years ago. It is the part of wisdom to look ahead and provide for the future, so let the question of more farm labor be agitated now.

You, Mr. Editor, must put your shoulder to the wheel and advocate an amendment to the above law so as to exempt from its provisions all persons actually engaged in agriculture in the United States. The statute should provide that if the foreign laborer leaves the service of his employer here without just cause within the year he shall be deported. Let the Planter encourage the farmers of the country to demand of their representatives in Congress the repeal or amendment of the aforesaid law along the lines indicated above.

E. W. ARMISTEAD.

South Boston, Va.

HOME BUTTER MAKING.

Editor Southern Planter:

I read Prof. Soule's article on butter in the South, also Mr. Price's answer.

Now we have no ice drippings like Mr. Price's dairy, and yet our butter is always in demand at 25c. at the nearest grocery. I know self praise is half scandal, but we go by what people tell us, and could get 30 cents easily if we made enough to compensate us to carry it to town.

In winter the milk is kept in the house. In summer the time when it is hard to make good butter it is kept under a shed, which has sweet peas, butter beans or morning glories trained around it, and the milk is in a trough there, and all the water for the stock has to run through that trough to the horse trough. You have no idea how cool it keeps and how firm and nice the butter is. Only a common wooden pump is used. The milk itself is kept in stone crocks which are scalded and aired well before being used.

Butter will not keep long after it has been on ice, and ours never has ice near it. Of course the Madam is dairy maid.

SUBSCRIBER.

Warwick Co., Va.

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Wood's Selected
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are specially grown for seed purposes, and are very much superior to ordinary potatoes. We carry the largest stock in the South, and can supply large buyers to the very best advantage, both as regards quality and price.

Wood's Twenty-fifty Anniversary Seed Book, which is mailed free on request, tells all about the best new and standard varieties of Potatoes, as well as about all Garden and Farm Seeds. Write for Seed Book and special price list of farm seeds.

T. W. Wood & Sons, Seedsmen,
RICHMOND, - VIRGINIA.

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GOLD MEDAL - PARIS, 1900.

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Ask your druggist for it or mail 50 cents to J. T. Shuprine, Savannah, Ga.

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Main and Tenth Streets.

THE

Southern Planter

PUBLISHED BY

THE SOUTHERN PLANTER PUBLISHING CO.,
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.

B. MORGAN SHEPHERD,
Business Manager.

TERMS FOR ADVERTISING.
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

NO ANONYMOUS communications or enquiries will receive attention.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

SUBSCRIBERS failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

Address THE SOUTHERN PLANTER,
RICHMOND, VA.

Entered at the Post-office, Richmond, Va., as second-class matter.

PUBLISHER'S NOTES.

To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month.

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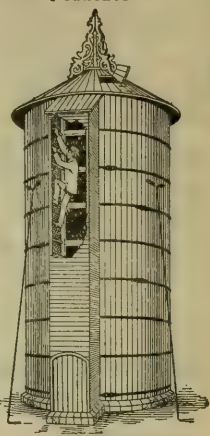
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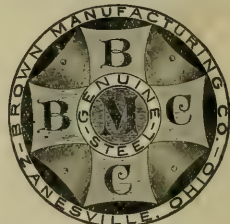
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Best hand sprayer made. Compact and elegant. Operates on the principle of the Venturi effect. Its valves are brass, coils, cylinder and plunger are brass. Indestructible packing rings. Large air chamber. Agitator that agitator. Agitator that agitator.

PRICE PLACES
The Century Sprayer is sold by all dealers in agricultural machinery. It is also sold by the following firms: **Hand, Buckel, Knapack, Power, Sprayers, St. Louis, Mo.** and **St. Louis, Mo.** and **St. Louis, Mo.**

THE DENING CO., Salem, O.
Sole Agents, Western States

ENGINES: 13 Horse Traction \$250; 10 Horse Traction \$300; Boilers, Engines new and second hand from 4 to 100 Horse. Single saw mill \$125; Double mill \$180; Machinery of every description at one-third actual value.
D. CASEY, Springfield, Ohio.

THE CHICKEN BUSINESS.

Editor Southern Planter:

It was in the beginning of the twentieth century that I entered the list of poultry breeders.

The summer of 1900 I raised eighty beautiful Pekin ducks. They seemed too pretty to be sacrificed to the market, so in trying to find some means of disposing of them advantageously, I carelessly inserted an advertisement in the Southern Planter. To my great surprise and satisfaction, inquiries came in by every mail, and before I hardly realized it, my ducks were all sold. I immediately became interested, and bought a trio of Mammoth Bronze turkeys, and in 1901 raised nineteen, which went like the ducks. Now, I keep a flock of twenty turkey hens, headed by a magnificent 45-pound Tom, and the demand for birds and eggs far exceeds the supply. The prettiest bird in the world is the Mammoth Bronze turkey. It is a pure delight to watch their plumage, as it glistens in the sunlight,—the changeableness of color and the beautiful bronze displayed in the feathers of neck, wings and back, is a perfect marvel. When first hatched turkeys should be fed on hard-boiled egg, cooked whey, raw onion tops and well-cooked corn bread. The whey seems to be more relished than bread, but too much of it will injure their digestive organs. The young are very hardy, and delight to wander. We give them free range of a 600-acre farm, and I dare say there is scarcely a spot on it they have not trod before they are three months old.

In 1902 I added to my stock Single Comb Brown Leghorn, Barred Plymouth Rock and White Wyandotte chickens, and now, as I wander through my poultry yards and survey the birds, it is hard to tell which feels and walks the prouder, the mistress or the fowls, for there is certainly a distinguished carriage and beauty of shape in thoroughbred fowls, which is entirely lacking in common stock. It has been my experience that for laying purposes, the White Wyandottes beat all others, although in the early spring the Single Comb Brown Leghorns literally pour out eggs. The barred Plymouth Rocks are good winter layers, and very fine table fowls.

As "It is the early bird that catches the worm," so, it is the early chick, that lives. Chickens hatched early, even to scratch in the snow, stand twice as good chances of living as those hatched in June. This holds particularly true with the Barred Plymouth Rocks and White Wyandottes, but the Leghorn being a smaller fowl, can't stand as much cold.

The poultry business is making remarkable strides throughout the South. People are beginning to realize the importance and profit of thoroughbred stock in the barn yards,—yet there is much to be done. Virginia, a recognized leader in the aristocracy of its people and animals, is sadly deficient

Hardie Spray Pumps Make perfect Fruit

You don't have to take our word for it, read what The French Nursery of Clyde, O., says about their HARDIE SPRAY PUMP:

"The spraying outfit we purchased of you has given the very best satisfaction. Any one in need of a spraying pump makes no mistake when they buy the Hardie."

THE FRENCH NURSERY, Clyde, Ohio.

Send today for our free book on spraying. Its complete formulas and valuable information how to make your orchard pay.

HOOK-HARDIE CO., Hudson, Mich.

164 Michigan St.

Get the Best

A Good Spray Pump earns big profits and lasts for years.

THE ECLIPSE

Is a good pump. As practical fruit growers we were using the common sprayers in our own orchards—found their defects and then invented The Eclipse. Its success practically forced us into manufacturing on a large scale. You take no chances. We have done all the experimenting.



Large fully illustrated Catalogue and Treatise on Spraying—FREE.

MORRILL & MORLEY, Boston Harbor, Mich.

Brass Sprayers Last Longest And Are The Cheapest To Buy.

Price \$3.50 and upward. Most any labor-saving device can earn a good profit by destroying the insect pests that threaten which cause so much loss. These sprayers may also be used for spraying weeds, killing cold-water plants, spreading disinfectants, cleaning wagons, curing surface diseases on cattle, chickens, and many other uses. Sprayers may be returned at our expense if they are found defective. Send for catalogue.

DAYTON SUPPLY CO., Dayton, Ohio.



Defender Sprayer

All brass, easiest working, most powerful, automatic mixer, expansion valves, double strainer. Catalogue of Pumps and Treatise on Spraying free.

AGENTS WANTED.
J. F. Gaylord, Box 50, Calkins, N. E.



MADE \$1725

In spare time and some money. You may do as well. Orders come fast for the

"Kant-Klog" Sprayer

with new spring shut-off. Catch a good time quick. Write for free sample pump and full particulars.

Rochester Spray Pump Co., 21 East Ave., Rochester, N. Y.



PATENT YOUR IDEAS

\$100,000 offered for one invention. \$5,000 for another.

Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.

CHANDLER & CHANDLER, Patent Attorneys

976 F Street, Washington, D. C.

THE BEST WAGON

For Every Variety of Use is the
"BROWN" WAGON

AND THESE ARE THE REASONS
 WHY



The "BROWN" principle increases its strength, durability and neat appearance.

We use Double Sliders for the coupling pole. The Tongue Chains have Coil Springs in them—makes them easy on the horse's neck.

Seat Hooks locate themselves—can't get out of place, can't slip. Hot Oil-boiled Wheels—tires can't come off.

Machine Boxed Wheels—must be true.

Machine Fit Sicks—better than can be done by hand.

Have Extension Shoe Skein which fully protects axle—use only on THE "BROWN" WAGONS.

Branch Chains to tongue chains—can't whip horse's legs.

Besides all this it is stamped "BROWN," which is a guarantee of excellence and superiority.

All about styles and sizes in free circulars.

BROWN MFG. CO., ZANESVILLE, OHIO.



Asingle row co. planter, made with or without Fertilizer attachment. Has either double or single wheel. Has 4 times or dropping dies. Dropping and fertilizer feed regulated by line chain belt. 8 chain wheels for dropers. Can drop 4 grains from 11 to 19 inches or 2 grains from 23 to 33 inches apart. 3 extra feed wheels for fertilizer attachment. Drop 20 to 55 lbs fertilizer per acre. Ground when in front can be raised or lowered for deep or shallow planting. Extra rippers can be supplied for dropping or drilling peas, beans, radishes, corn, etc. Write for Catalogue.

HENCH & DRONGOLD, York, Pa.



upon which we guarantee the value of the world's famous

CAHOON SEED SOWER.

Write now to **GOODELL COMPANY,**
 93 Main Street, Astoria, N. H.

Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 3 horse power, \$100; 6 H. P. double cylinder, \$200.

SOUTHERN MACHINE MANUFACTURING CO.,

731 E. Cary Street, Richmond, Va.

Mention THE SOUTHERN PLANTER in writing.

in poultry shows. Why is this? I sit and wonder why. North, South and West, each State has her dates, and there are poultry shows and poultry shows, but we, Virginians, have to hang our heads and say, we either do not exhibit our poultry, or we have to exhibit at shows in other states. Why? Is it because we have no fine birds—a thousand times no; as in other things. Virginia would doubtless head the list. Is it lack of interest?—no; for the State has her full quota of enthusiastic poultry breeders. Then, I see nothing lacking, save a determination to get together and make a beginning. I appeal to all poultry breeders in the State to give the subject careful consideration, and let us cooperate and have our poultry show this year.

CLARA L. SMITH,
 Caroline county, Va.

RURAL FREE-DELIVERY.

Editor Southern Planter:

I notice in your January issue, an article headed "Disappointments in R. F. D." I want to say that our agricultural people are much in need of agricultural reading matter, and I do not know of a better way to get them interested than the present effort the government is making to have the mail delivered at their homes. I, for one, think it is the grandest move they have ever made, so far as our Louisiana people are concerned, and I hope they will do away with all the Star routes as soon as possible, and give us free delivery, for I think it is a great move to get the people educated. I live seven miles from the railroad, and get my daily papers every day, whereas heretofore I only got them once or twice a week.

N. W. WINSTON,
 R. F. D., No. 3, Louisiana, Va.

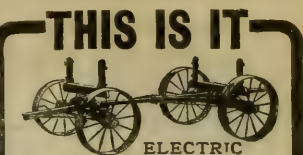
FROM AN ADVERTISER.
 The Southern Planter Publishing Co.,
 Richmond, Va.

Gentlemen:—It affords me pleasure to write this letter to a concern which has been so honorable and upright with me as yours. I wish to thank your Mr. Shepherd, for the courtesy extended to me while on my visit to Richmond, and to say that I have completed arrangements with one of Richmond's leading business houses, under management of Mr. Ashton Starke, to handle a part of our line of goods.

I am just starting to our factory at Lansing, Mich., and will use my influence to have my house advertise their Ideal Gasoline Engine in your valuable paper. I consider it the cleanest and nicest paper published, and the results from my advertising therein have far exceeded any other, considering cost of same. Again thanking you for kind treatment and fair dealing, I remain,

Yours very respectfully,
 A. M. D. HOLLOWAY.

Phila., Pa.



The wagon you are looking for; the wagon folks are all talking about. By every test it is the best—no living man can build a better. Of course you have guessed that it's the

ELECTRIC HANDY WAGON

Low steel wheels; wide tires and durability and speed are written all over it. Don't be talked into buying an inferior. Get the wagon that lasts. Or we'll sell you a set of Electric Steel Wheels and make your old wagon new at slight expense. Spokes united with the hub, absolutely impossible to work loose. Sold on a money-back guarantee. Their saving in time, labor, horse flesh and repair bills will pay for them in a single year. More than a million and a quarter in use. All we ask is a chance to tell you how good our wheels are. Drop a line, we'll do the rest. Catalog free.

ELECTRIC WHEEL CO.,
 Box 149 Quincy, Ill.

BUGGIES.



SPINDLE WAGONS, CARTS,
 etc. 84 different styles and grades. Finest material and workmanship. Get our prices and see our vehicles before purchasing.

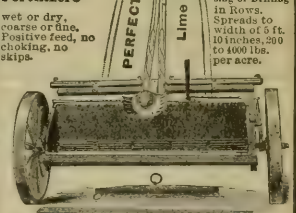
SAFETY BUGGY CO., 1309 E. Main street, Richmond, Va.

Fertilizer Drill

Handles All Commercial Fertilizers

wet or dry,
 coarse or fine.
 Positive feed, no
 choking, no
 skips.

For Broadcast
 Top-dressing
 in Rows.
 Spreads to
 width of 5 ft.
 100 lbs. 20
 to 400 lbs.
 per acre.



LOW AND EASY TO LOAD.

Broad tires, no rutting. Quick changes from drilling to broadcasting, also for thick and thin spreading. Furnished with shafts or tongue. Write for descriptive circular and testimonials.

Special Large Size, Sows 8 Feet 3 inches Wide.
Belcher & Taylor A. T. Co.,
 Box 25 Chippewa Falls, Mass.

YOU CAN MAKE \$3 TO \$10 A DAY
 Fitting places for us. The profits are large. Our 24-page FREE EXT. BOOK tells how. Write for it today.

JACKSONIAN OPTICAL COLLEGE, Dept. 2093, Jackson, Mich.

Clark's Tools for Large Hay Crops

Clark's Rev. Bash Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the subsoil water. It is an excellent machine for covering in sugar cane. Strength guaranteed. Can plow a newly out forest, stump, bush, or bog land; leaves land true, clean for any crop.

Clark's Double Action Cutaway Harrow moves 15,000 tons of earth in a day. Send for Circulars.

Clark's Rev. Sulky Disc Plow
Made single or double. One or two furrows five to ten inches deep, 14 inches wide. For two or four horses. Light draft. No side draft. No similar plow made. When Clark's grass tools are used as directed in his grass circular, we, the C. H. Co., guarantee them to kill wild mustard, charlock, hard hack, sunflower, milk weed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seeding or grass.

THE CUTAWAY HARROW CO.,
Higginum, Ct., U. S. A.



Hallock Flat Tooth Weeder

Kills weeds, stirs top soil, makes dust mulch, preserves moisture. Great benefit to all crops. Manufactured under special license. **Seeder Attachment** insures uniform sowing and right covering of all grasses. Sows 2 to 18 quarts per acre. Ask for book of field sections showing weeder at work.

Keystone Cultivator Attachment

for Sulky, Riding, Walking or Two Row Cultivators. Runs on the row, where shovels cannot reach. Uncovers corn, stirs soil, kills weeds. Great cultivator feature. Write for descriptive circulars.

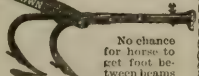
Keystone Farm Machine Co.

1554 N. Beaver St., York, Pa.

GENUINE "BROWN"

DOUBLE SHOVEL PLOW
Made with WOOD CENTER BEAMS and STEEL SHANKS.

LIKE ALL THE "BROWNS" IT IS THE BEST OF ITS KIND.



No chance for horse to get foot between beams

No. 2.

Equipped with our improved slotted shovel attachment, a device which greatly adds to the life of the horse. Always ask for the BROWN and insist upon getting it. If your dealer does not have it, write to us direct. Our free catalogue contains full description of our single and double Shovel Plows, Riding, Walking and Tongueless Cultivators, "GOHNS" Surface Cultivators, Harrows, Wagons, etc.

BROWN MFG. CO., ZANESVILLE, O.

VALUE OF A GOOD MARE.

MR. JOHN F. LEWIS MAKES COMPARISON THAT SHOULD BE OF GREAT VALUE TO ROCKINGHAM BREEDERS.

(From Daily News.)

It has often puzzled me to think of the difference in price of stallions and mares of the draft breeds in America; while in France, the breeders hold the mares at higher figures. Counting cost of keep, liability to accident and diseases, the mare is the most valuable, as she can do as much work as any gelding on the farm, and raise a colt every year; thus the colt is almost a clear profit, while the expense of the stallion on and off season, is great and the clear profit no more, and often not as much as the weanling pure bred colt will sell for. I can call to mind and name sixteen Percheron mares; and colts under three years old, that brought \$7,050,—all sold in this county since November, 1901. These sixteen include mares and fillies ranging in age from seventeen months to sixteen years, and stallion foals from six months to two and a half years of age—not one stallion of serviceable age at time of sale; an average of \$440.62 per head; this would be a good average if all had been five and six years, but from six months to sixteen years.

Some may say these are fictitious values, but the facts will not justify such a statement, as I am personally acquainted with the sellers and buyers of these animals and know that only one of the sixteen named could be bought at anything like their selling value, and this one had met with an accident, that greatly lessened its value.

Take the sales of the stallions, and the average would be much greater, but as I do not know of all the stallions sold, or the prices they sold for, I cannot more than approximate the average all round. The figures I give were gotten by the Rockingham citizens, not what was paid for animals bought outside the county by our people. What does \$1,000 amount to in the cost of a mare that is with foal if you are assured \$500 for the foal at six months old? This was the case recently when a Virginian bought a prize-winning mare at \$1,000, and two days after was offered \$500 for the colt.

William Hunt, of Illinois, told me that the greatest money-maker he ever owned was a mare that cost him \$1,330 at public auction. I had a friend in Maryland who paid \$2,300 for two mares. Of course, these animals I mention were all registered Percherons, and with this breed it is like all others there are "culs" and good ones, low-priced and high—but the low-priced are generally the dearest in the long run. This, of course, if they are bought for breeding, but if for barter most "any old thing will do." I sold a perfectly sound three-year-old stallion for \$300, and his action, style and bone were superb, but he was not a draft horse in anything but pedigree.



FRUITS AND VEGETABLES SHOULD BE SPRAYED

now in order to secure best results. Let us tell you how in our complete Catalogue and Spraying Calendar.

SYDNOR PUMP & WELL CO., Inc.

Box 949,

RICHMOND, VA.

IRON FENCE CHEAPER THAN WOOD



We Sell Iron Fence

MANUFACTURED BY
The Stewart Iron Works Company
CINCINNATI, OHIO

Whose Fence received the Highest Award, "Gold Medal," World's Fair, St. Louis, 1904. The most economical fence you can buy. Price less than a respectable wood fence. Why not replace your old one now with a neat, attractive IRON FENCE?

"LAST A LIFETIME." Over 100 designs of Iron Fence, Iron Flower Vase, Settees, etc., shown in our catalogues.

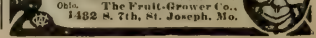


Low Prices
will
surprise you
CALL AND
SEE US



How to Grow Strawberries

It's a trick to raise strawberries profitably season after season; yet any one can learn how. The Fruit-Grower has compiled a valuable booklet that explains all the "ins and outs" of strawberry raising. It is written by Prof. Whitten, who is an authority on this subject. This is one of ten booklets called the "Bro. Jonathan Fruit Series." All are terse and concise. There's a way to get them free. Write us and we'll tell you how. Send 2c and name of 10 persons in credits from catalogue for a year's trial. Return 2c for the name of 10 persons in credits from catalogue for a year's trial. The Fruit-Grower Co., 1482 S. 7th St., Joseph, Mo.



TRY THIS MILL

10 Days Free.
I will send any responsible farmer one of

Ditto's

Latest Double Cut,
Triple Beared
Ball-Bearing

Feed Grinders

On Ten Days Trial—No Money in Advance.
It does not grind at least 20% more ear-corn or other grain than any other two horse sweep mill made, send it back at my expense. Don't miss this offer. Ball-bearing throughout. Only 10 ft. sweep. Light draft. Grinding rings never touch each other—they last for years. Both grinders revolve; self-cleaning. Ask for New Catalogue.
G. M. Ditto, Box 48 Joliet, Ill.



GRIND FINE OR COARSE

all feeds, ear-corn, with or without husks, all grains, with the

KELLY

DUPLEX
Grinding Mills

They are the speediest, easiest running, strongest and most desirable mill made. Four sizes, any power. New double cutters, force feed, no choking. It is true economy to buy a Kelly Mill.

O. S. KELLY CO., 159 N. Lime St., Springfield, Ohio

Quaker City Mills

are feed grinders tested and used by thousands during the past

Thirty-Eight Years

Don't Experiment. This mill costs you no more than some new venture. Let the other fellow do the experimenting. It grinds all kinds of small grain and ear-corn to any degree of fineness in one operation. Built in eight sizes from one to twenty horse power. 38th annual catalogue free

The A. W. Straub Co., 2727 Filbert St., Philadelphia, Pa. 41-49 Canal St., Chicago, Ill.

Make Your Own Fertilizer

at Small Cost with

Wilson's Phosphate Mills

From 1 to 40 H. P. Also Bone Cutters, hand and power, for the poultryman; Farm Feed Mills, Graham Flour Hand Mills, Grit and Shell Mills. Send for catalogue.
WILSON BROS., Sole Mfrs., Dept. D, Easton, Pa.



WARRIERS CHAIN HANGING STANCHION

CLEAN, SAFE, DURABLE AND COMFORTABLE

WALLACE B. CRUMB, FORESTVILLE, CONN. P. O. BOX 440

Mention The Southern Planter in writing.

He was a registered stallion, but a "cull," and if I had not sold him to a party who was pleased with him, would have made a gelding of him, and perhaps he would have brought \$150.

If our farmers would keep good, big grade mares, they would more rapidly improve their horses. Instead of selling off the best mares because they will bring a little more than the others, they could more than save the difference in price on the mares in one or two years. Any good Percheron purebred mare, if a regular breeder, is worth \$1,000, but can be bought for a great deal less money.

JOHN F. LEWIS, Lynwood, Va., January 24, 1905.

TRUCKERS AND GARDENERS SHOULD PLANT LARGELY OF EARLY PEAS.

The severe weather which we have experienced during February, and which has extended far down into Florida, is going to make a considerable shortage in early green vegetables, and on this account our markets will be very bare of green vegetables until late in the season. Indications are that the earliest crops of green vegetables will sell at good prices, both in home markets and in the large cities North.

The opportunity presented to our southern truckers and gardeners, to make money out of peas and other early truck crops is one that they should not fail to take advantage of. Early peas are one of the first crops to come in and can be safely planted just as soon as the ground can be gotten ready.

A MINISTER'S ENDORSEMENT.

Dayton, O., January 24, 1905.
Dr. Jos. Haas, V. S., Indianapolis, Ind.
Dear Sir:—Your Hog Remedy has proven entirely satisfactory, and does the work to perfection. We had four very sick hogs, and two of them died the day before we received your remedy. The other two showed marked improvement after the second dose of the remedy, and in four days were on full feed again, and have increased in flesh very fast since their recovery. I think your remedy will do all that you claim for it and will always keep some of it on hand. I have about 300 hogs on my farm at present.

Yours truly,
H. C. JAMESON, Pastor Grace M. E. church.

THE FONTAINE TUGS.
Washington, D. C., January 19, 1905.
The Fontaine Co.
Gentlemen:—I have in use since November 21, 1904, the Fontaine Safety Tug, and I cheerfully recommend it to all horsemen wishing to save their animals from saddle and girth galls; also for its safely feature in case of breaching breaking. It is all you claim for it.
Very respectfully,
C. E. BROWN, Veterinarian.

LAMP-FITS.

How do you know what chimney fits your lamp?

Your grocer tells you.

How does he know?

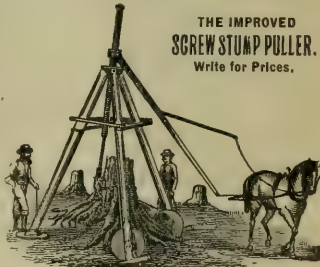
He don't.

Do you then?

That's about how lamps are fitted with chimneys by people who don't use my Index; and they complain of bad chimneys! Lamp-Fits indeed! Do you want the Index? Free.

MACBETH, Pittsburgh.

THE IMPROVED SCREW STUMP PULLER.
Write for Prices.



Chamberlin's M'tg Co., Olean, N. Y., U. S. A.

HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.
Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

STUMP PULLERS SEVEN SIZES \$1750 UP
DEPT. P. W. SMITH GRUBBER CO. LACROSSE WIS.
WE PAY THE FREIGHT CATALOG FREE

Excelsior Swing Stanchion,
Warranted the best. 30 Days' Trial.
Can be returned at our expense if not satisfactory.
THE WASSON STANCHION CO., Box 600, Cuba, New York.

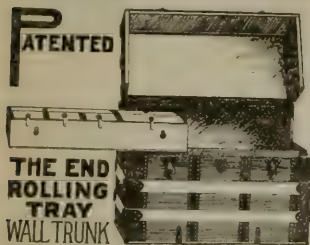
\$24.00 WEEKLY
For man with rig to introduce Royal Stock and Poultry Remedies; we mean business and furnish best of references. **ROYAL CO-OP. MFG. CO., Dept. 2, 2, Indianapolis, Ind.**

In writing mention Southern Planter

ONE OF THE

Latest Inventions

Direct from our factory to your home, we will sell you one of our FAMOUS TRUNKS



at wholesale price. They are the most convenient TRUNKS for use in the home, and also built extra strong for travelling. The tray runs on rollers, and is moved easily, even a child can handle it. You get into the bottom in a wink. No heavy top to lift. Fits close to the wall, and requires no lifting out to open it. It is the best TRUNK made for the price (which is very low). Our guarantee goes with every TRUNK, and we let you be the judge of it.

FREE—Our illustrated price list No. 5. Write us for it to-day. It explains our TRUNKS thoroughly. We will be pleased to send it by return mail. H. D. THACKER & CO., Sole Manufacturers, Petersburg, Va.

PHONE NEWS FOR FARMERS

GREAT ACTIVITY AMONG FARMERS

Everywhere farmers are awakening to modern ideas.

Just now there is great activity among farmers in establishing and building telephone lines all over this country. The telephone saves time in getting help in a hurry; keeps the farmer in touch with the markets at all times; and in case of emergency gets assistance from neighbors or the city without delay. The building of private and party lines has been so stimulated and cheapened by the introduction of



Sirromberg-Carlson
Telephones

that every neighborhood, no matter how small, can well afford its own telephone line.

For farmers lines none but the best telephones will do—instruments that are practically perfect, that do not require constant adjusting, and "dinkering" to keep them talking right. There are many telephones offered to farmers that are actually not fit for such service. It pays to get good instruments at the start. Sirromberg-Carlson Telephones meet every need of the farmers line. Write for book P-123 "Telephone Facts for Farmers" how to organize your neighbors and build a line. Ask for book P-123 telling how successful lines have been built.

**SIRROMBERG-CARLSON
TELEPHONE MFG. CO.**
Rochester, N. Y.,
Chicago, Ill.

TELEPHONES and line material for FARMERS' LINES

So simple you can build your own line. Instruction book and price list free.

The Williams Telephone & Supply Co.,
66 Central Ave., Cleveland, O.

WE'LL PAY THE FREIGHT

Send a Busy Wren, Steel Tire on, - \$7.95
Wig Rubber Tire, \$16.00. 1 mfg. wheel \$6.40.
tread, Top Buggies, \$28.75; Harness, \$3.60. Write for
catalog. Learn how to buy direct. Repair Wren \$2.50.
Wagon Umbrella \$2.50. V 30015, Cincinnati, Ohio.

In writing mention Southern Planter

SOUTHERN POETS

EDGAR ALLAN POE.

Mary Washington.

But for the fact that I am aiming to present the southern poets in chronological order, I should reserve Edgar Allan Poe for the last, as forming the climax of all southern, and indeed, all American poets. Long ago, Tennyson made this discovery and pronounced him the first of all American poets. Longfellow, Bryant, Whittier and Lowell are pure and refined poets, but not one of them has the true Elysian flavor, and the love and perception of the beautiful that Poe has. "The Raven" alone has more genius in it than all the combined works of the New England poets named above. No writer has been more misunderstood and misjudged than Poe. Griswold's biography of him produced the impression that his life was wayward and irregular from the hapless beginning to its disgraceful close, and though many of Griswold's allegations were denied even at the time, still the denials were local and isolated, and could not make headway against libels repeated in many editions, and unfortunately also, Griswold's narrative was sufficiently interlarded with truth to make it more harmful. Of late years, however, there has been a great reaction in Poe's favor. The mists of prejudice and misconception have rolled away, and posterity renders him a tardy justice in his capacity as a man. As an author he obtained recognition from the first, though his own generation did not fully recognize the fact that a star of the first magnitude had appeared in the literary sky, a star of a lustre altogether peculiar, and differing from any that had ever appeared, or ever will appear. Mr. J. H. Ingram, the careful editor of Poe's works, has been an important factor in clearing away the misrepresentations attached to his name. Mr. Ingram has so carefully collected and plainly set before us the well authenticated facts of Poe's life, that he enables us to see the man approximately as he was, erratic and peculiar, 'tis true, but with the human feelings and affections, especially for his delicate young wife, whom he fondly loved, and faithfully cherished, as far as his untoward circumstances permitted. Mr. Ingram entirely dispels the popular idea that Poe's tales and poems were flung off from a disordered brain, in intervals of debauchery. On the contrary, he was a most careful literary worker and, not trusting alone to his native talent, but showing that "infinite capacity for taking pains," which Carlyle ascribes to true genius. His poems and tales were the fruit of the most carefully studied out conceptions of his brain, clothed in the most appropriate and beautiful language.

Edgar Poe was born in Baltimore, February 19, 1809. His father was a man of good family, who had married an actress and taken to the stage as

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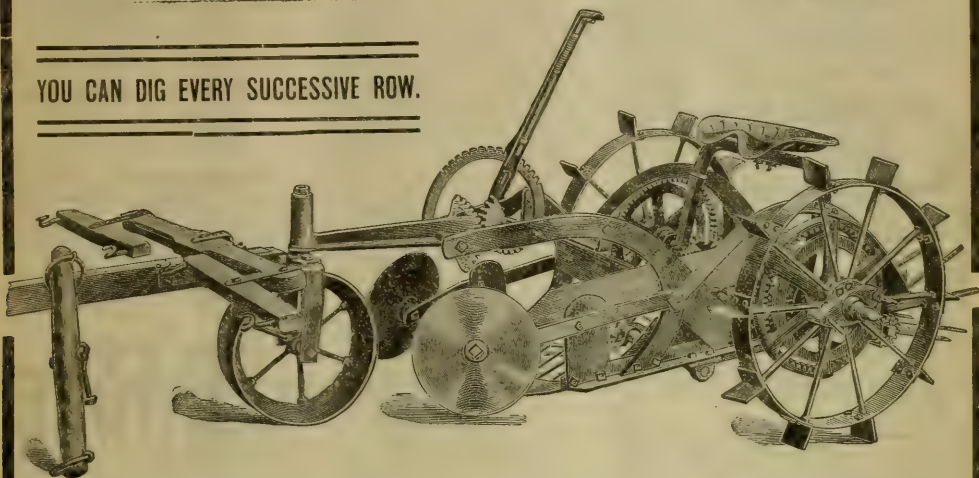
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his profession. Both parents died in 1811, and the orphan was adopted by his godfather, Mr. Allen, of Richmond, Va. From his eighth to his thirteenth year (1816-21), he was placed at school in England, whence he was transferred to an academy in Richmond, Va., and thence at seventeen, to the University of Virginia. Why he left at the end of one session is not clearly explained, though it has been positively ascertained that he was not expelled. It is admitted, however, that he had contracted debts, and had an ungovernable passion for card playing, which probably led to the breach between Mr. Allen and himself. Mr. Wertenbaker, who was for many years librarian at the University of Virginia, wrote a few years ago, in reference to Poe: "The hardihood, intemperance and reckless wildness imputed to him by biographers, had he been guilty of them, must inevitably have come to the knowledge of the faculty, and met with merited punishment. The records of which I was then, and am now, the custodian, attest that at no time during the session, did he fall under the censure of the faculty. I often saw him in the lecture-room and the library, but never in the slightest degree under the influence of intoxicating liquors."

After he left the University of Virginia, Poe disappeared for two years, and it was rumored that he had set out for Europe, to help the Greeks in their struggles for independence. Reappearing in Richmond in 1829, he remained there a year, and was then entered as a cadet at West Point. But the rigid routine and iron-clad rules of the place were thoroughly at variance with his temperament. He neglected his duties, disobeyed orders and was dismissed. What he did for the following two years has not been clearly ascertained, but in 1833, he appeared as the successful competitor for a prize offered by a Baltimore newspaper for a prose story, and from that time on, he subsisted by literature. During the thirteen years of his literary life, Poe was connected with various newspapers and magazines in Richmond, New York and Philadelphia, and there is unanimous testimony that he fulfilled all his literary engagements with great thoroughness and punctuality. There was no instance of his connection with a periodical being severed by his irregularities. He first wrote for "The Southern Literary Messenger," and edited it for some time. Then he removed to New York in 1837, wrote criticisms and did editorial work for the "New York Quarterly Review." Then he removed to Philadelphia, and was for four years the mainstay of "Graham's Magazine." He then conceived the idea of starting a magazine his own, but having no capital, he was obliged to abandon this project, and return to New York and miscellaneous journalism. He was very poorly paid for his work, receiving only \$10 for "The Raven," which appeared in 1845, and which obtained immediate recog-

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dition, being, in a few months, read and recited wherever the English language was spoken. To add to his distresses he had an invalid wife, whose lingering sickness of eight years, kept him on a long strain, and whose needs he was unable to supply out of his meager pay. Nothing could be more pathetic than the description given by a lady who went to see the couple in their little cottage in Fordham, N. Y., and found Mrs. Poe (almost in a dying condition), wrapped in her husband's great coat, and lying on a straw bed furnished only with sheets and a white counterpane. Imagine the heart-rendering strain on a proud, sensitive man,—writing with the wolf at his door, and his affections on the rack! It is no wonder that during the latter part of her life, and the two years by which he survived her, he had recourse to the dangerous help of stimulants. His wife died in 1847, and he in 1849, aged 40, just at the time when he should and might have been at his zenith under happier auspices. It would be difficult to analyze in a short space (or even a long one), the exquisite charm of Poe's poetry. It is entirely unique. He is not in sympathy with the ordinary joys and sorrows of human life, like Wordsworth, Cowper, Whittier and other poets that are familiarly read and much loved. This element is almost entirely lacking in his works, and on this account, some critics have said he would never be a general favorite with the great mass of readers; nevertheless, his popularity, like a great tidal wave, is flowing on, ever broader and deeper. He is not (technically, at least), anything of a moralist, so people of that type are not attracted to him on these grounds. It is hard to define exactly wherein his charm consists. Primarily, he strikes me as a lover and exponent of the beautiful, and in this, he reminds me somewhat of Keats, though their styles do not resemble, but differ, as "one star differeth from another in glory." In his worship of beauty, Keats shows more of the joyous Greek spirit; whilst there is a weird, sombre undercurrent in Poe's brightest effusions. He is richly endowed with both fancy and imagination, and has a perfect command of words, especially of adjectives, which are the choicest embroidery of language. Note how effectively and beautifully he uses them, as in the following instances:

"And the sicken, sad, uncertain rustling of each purple curtain, etc.,
"Rare and radiant maiden," "quaint and curious volume of forgotten lore"—

In view of Poe's incomparable gifts, it seems the strangest oversight on earth that in the "Hall of Fame" recently erected in New York, under the auspices of Miss Helen Gould, he should have been left out. It was as great a blunder as Englishmen would have



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Tomatoes, melons, cabbage, turnips, lettuce—in fact, all vegetables remove large quantities of Potash from the soil. Supply

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Assets, Jan. 1, 1905.....	\$73,696,178.51
Premium receipts in 1904.....	12,868,922.77
Interest and other receipts in 1904.....	3,062,539.76
Total receipts in 1904.....	15,931,556.76
Payments to Policy holders in 1904.....	6,971,793.55
Legal Reserve on Policies, and all claims.....	64,945,752.16
Special Reserve in addition to Reserve above given.....	24,994,786.00
Life Insurance issued, revived and paid for in 1904.....	28,856,967.00
Life Insurance in force Jan. 1, 1905.....	237,304,100.00
Accident Insurance in force, Jan. 1, 1905.....	217,236,164.66
Guarantee Fund in excess of Requirements by Company's Standard.....	6,555,640.65
Guarantee Fund in excess of Legal Requirements.....	8,850,426.65

Paid Policy holders since organization.
\$145,918,246.86.

Great Gains in Business During 1904

Increase in Assets.....	\$ 628,316.16
Increase in Guarantee Fund over Requirements.....	883,884.10
Increase in Premium Income.....	1,135,668.90
Increase in Total Income.....	1,572,682.20
Increase in Life Insurance Issued and Paid for.....	2,225,105.00
Increase in Life Insurance in Force.....	14,001,862.00
Increase in Accident Insurance in Force.....	8,618,926.66

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ORGANIZED JANUARY 9, 1899.

made if they had excluded Shakes-
peare from Westminster Abbey.

And to make the blunder more glar-
ing, the same committee who excluded
glorious Edgar Poe, admitted amongst
the immortals Walt Whitman, rough
and unkempt in a literary sense, and
not even possessing the greatness of
thought which would serve to offset
the gross defects of his style. The
whole thing seems like a burlesque.

But the others have been more mind-
ful of Poe's claims. The Metropolitan
Museum of Art, in New York, contains
a statue of him, in the act of being
crowned with laurel by the Muse of
Poetry. The University of Virginia
has inscribed his name on the frieze
of the library's lofty rotunda, along
with the names of the world's great-
est singers and teachers, and has
placed in the alcove beneath his name,
the fine and sympathetic bronze bust
of him made by Zolnay, and unveiled
on the Fiftieth anniversary of the
poet's death, October 7, 1899.

Special attention is called to the
"ad" of the Sydnor Pump & Well Co.,
Inc., in this number. This company
handles the reliable line of Spray
pumps manufactured by the Deming
Co., whose pumps are used and recom-
mended by the Virginia and North
Carolina Agricultural Departments;
they are also extensively used by the
leading fruit growers of the South.
Any one desiring special information
as to the style of pump best suited to
their conditions should write the
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which not only contains complete in-
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replete with valuable formulas and
spraying calendars. Secure their
1905 catalogue just out. They are also
dealers in reliable gasoline engines,
wind mills, tanks, etc.

We acknowledge receipt of a copy of
the Dollar Making Incubator propo-
sition. This is the title of the booklet
recently issued by the Iowa Incubator
Company of Des Moines. It describes
the methods they use in the construc-
tion of their incubators, and points
out the advantages to be gained by
the use of Iowa incubators. It con-
tains an entertaining discourse on
the profits of poultry raising in its various
branches. All know there is money in
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it more surely than ever. Anyone who
has studied the poultry proposition
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future time, or anyone who is now in-
terested in the business, and thinks
they would have use for an incubator
of the right kind, would do well to
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mention the name of this paper when
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Harvester Talks to Farmers—No. 1.

A Series of Personal Talks to the Grain and Grass Growing Farmers of America.

WHEN you come to harvest your grain or grass you want to have at hand, ready for use, a harvesting machine upon which you can put every possible dependence.

Naturally, with a crop before you that won't wait for cutting, you want to feel perfectly safe about your harvesting machines. You don't want an experiment nor a "maybe-so"; you can't afford to run a risk.

We have purchased this space from the publisher of this paper for the purpose of letting in a little light on the harvesting machine question.

In a series of talks we intend to show you how you can get a harvesting machine which you can *know* will bring you through the harvest in good shape, without loss of time, without delays, and without trials of temper.

We want to point out, from the *farmer's* view the advantages of certain machines, telling in every case the *why* and giving the reasons behind every statement we make. This is an advertisement, but every word in it is *true*—and we prove it.

It means more to your pocket-book than it does to ours.

Since the invention of the modern grain harvester and self-binder, more than a hundred different machines of various styles and types have been put on the market.

The vast majority of them were offered for sale but a very short time.

Why?

What is it that determines the success or failure of a farm machine or implement?

Simply the *will of the farmer*.

He is the judge and the jury in the case. His decision is final.

Take your own case as an example. You want any labor saving machinery for use on your farm that is *good*.

You don't want the poor kind at any price. The farmers of this country have always been on the lookout for anything and everything that holds the promise of better results.

If a good thing is presented to them they buy it and pay for it and make a success of it.

So if an agricultural implement of any kind fails to make a success, there is only one reason for that failure, and that is that it has not the merit that commends it to the good judgment and sound sense of the practical farmers who are asked to use it.

On the other hand, if a machine succeeds in winning popular favor, not only for one year, but throughout a series of years, you can depend upon it, that there is a *merit* behind it.

You can't fool the farmer more than one season.

So, then, when you see such harvesting machines as the Champion, the Deering, the McCormick, the Milwaukee and the Plano, growing in popularity every year and gaining a stronger, firmer hold on the respect of the farmers who buy them and use them, you are pretty safe in making up your mind that there is good, honest value in these machines—a value and a merit not found in machines which have failed to win the confidence of any considerable number of farmers.

But mind you, it is not an easy matter to build a first class machine every year, any more than it is an easy matter to get thirty bushels per acre of wheat every season, or to breed a 2:10 trotter or a champion bull every time.

The manufacturer has his troubles—just as annoying as those of the farmer.

And the securing of first class materials is one of his first and most grievous difficulties. The lumber market, the iron market, the steel market, fluctuate; he cannot be sure what the materials will cost him a few months hence.

Quality varies. Very frequently a shipment of coal or steel or lumber or paint or canvas does not come up to specifications.

Sometimes the thing most needed for making a perfect product seems almost unprocureable.

The uncertainty of securing the right materials, at the right time, at the right price, naturally led to an inevitable result:

The manufacturers of the principal harvesting machines—those which had made for themselves a place on the market—said:

"Here, we can't stand this; we *must* have better materials than we are getting; we *must* have them when we want them, and we *must* have them at a fair price. If there's no other way to do it, we'll mine our own ore, roll our own steel, saw our own lumber, make our own paint, mine our own coal and make our own coke, as well as build our own machines. If one of us cannot operate an iron mine and a steel mill, maybe two of us together can—certainly five of us can."

So five it was.

The manufacturers of five of the best self binders decided that by *co-operation* they would produce for use in their several factories materials for harvesting machine building, such as they *could not possibly procure* in any other way—materials which would be under their personal inspection from start to finish, and which they could be sure were right in every particular.

They have done that.

They have done it exactly on the same principle as several farmers' club together to

import a good stallion or to own a good boar, or a score of farmers co-operate in building a creamery, or five hundred or more farmers form their own fire insurance company.

This co-operation has resulted in producing materials which enable the manufacture of a line of harvesting machines which have never been equalled for *durability and long life, for reliability and certainty of results and for all round satisfaction* in the hands of the farmer.

Such harvesting machines as are produced to-day in the various plants of the International Harvester Company could not, by any possibility, be produced under any other condition—excepting at an immense advance in cost to the farmer.

We want to tell more about the facilities of the International Harvester Company in later articles in this series—more about its immense lumber camps in Arkansas and Missouri; about its coal mines in Kentucky; its iron mines in Wisconsin and Minnesota—its steel mills in Illinois; we want to tell about the other improvements it has effected and economies it has made, both in manufacturing and in distribution—but in the present article we want only to leave these two thoughts with you:

1. The International Harvester Company is made up of the manufacturers of only those machines which the *farmers* of the country had endorsed as being most worthy of confidence. The Champion, the Deering, the McCormick, the Milwaukee and the Plano have *proved their worth* and gained the enthusiastic approval of users in all parts of the country.

2. The International Harvester Company, by co-operation of its five plants, has facilities for manufacturing from the mine and forest to the farm, possessed by no other manufacturer of agricultural implements, enabling it to *know* that every machine in any one of its plants has in it only the best procurable materials.

We want you to think of these two things. The harvesting machines endorsed by the most farmers.

The harvesting machines with the best materials in them.

That means something to you.

Look for our next talk, and, in the meantime, you will doubtless find agencies in your own locality for these harvesting machines. Each dealer understands thoroughly the one line he sells, and carries a complete stock of repair parts. He'll be pleased to show you his particular line and to provide you with catalogue and full information.

In the International Harvesting Machines,

Champion, Deering, McCormick, Milwaukee, Plano,

You are Offered

The **QUALITY** which comes from the world's greatest facilities in manufacturing.

The **ECONOMY** which comes from stable, uniform cost of materials.

The **SAFETY** which comes from a well established, permanent institution.

The **CONVENIENCE** which comes from separate agencies everywhere and repairs always on hand.

You cannot afford to overlook these advantages. They are not offered you in other lines of harvesting machines.

Remember: The International lines are represented by different dealers. See them for catalogues.

Binders, Reapers, Headers, Header-Binders, Corn Binders, Corn Shockers, Corn Pickers, Huskers and Shredders, Mowers, Tedders, Hay Rakes, Sweep Rakes, Hay Stackers, Hay Balers, Knife Grinders, Gasoline Engines, Weber Wagons, Binder Trwine.

Wood's Seeds.

New Era Cow Peas

are rightly named. They are the best of Cow Peas, whether for northern, western or southern planting. They are early to mature, upright in growth, enormously productive, both of vines and peas, and are altogether the most satisfactory and sure croppers grown.

We are headquarters for **Cow Peas**; had over forty different varieties in our exhibit at **St. Louis**, on which we were awarded the **Grand Prize**.

Wood's Descriptive Catalogue gives the fullest information about **Cow Peas** and all **Garden and Farm Seeds**. Write for it and special price list of Farm Seeds.

T. W. Wood & Sons, Seedsmen,
RICHMOND - VIRGINIA.

If you want the sweetest and best **Water Melons** and **Cantaloupes** grown, plant **Wood's Southern-grown seed**. Our Descriptive Catalogue tells all about the best kinds to plant. It's mailed free for the asking.

Peas For Sale.

2,000 bushels of mixed peas, \$1.25 per bushel.
1,000 bushels of Clay peas, \$1.30 per bushel.
500 bushels of Improved Whip-poor-will peas, \$1.40 per bushel.
500 bushels of small Whip-poor-will peas, \$1.40 per bushel.
100 bushels of New Era peas, \$1.60 per bushel.
500 bushels of Soja beans, \$1.35 per bushel.
500 bushels of Black Eye White peas, \$1.60 per bushel.
500 bushels of Brown Eye White peas, \$1.50 per bushel.
100 bushels of Burt 90 day oats, 75 cents per bushel.
200 bushels of re-cleaned Buckwheat, \$1.15 per bushel.
2,000 bushels of White Yam Seed Sweet Potatoes, 75 cents per bushel.

(Largest yielders and have finest keeping qualities of any potato grown in the South.)
Peas sacked 1 c. b. Hickory, N. C.; prices subject to market changes. **HICKORY MILLING COMPANY, Hickory, N. C.**

HEAVY YIELDING

Seed Corn

direct from the farm, from crops making 60 to 75 bushels per acre. **HOLT'S STRAWBERRY, COCKE'S PROLIFIC and VIRGINIA DENT**, \$1 per bushel; 50c. per peck, sacks included. **OCCONECHEE FARM, Jeffers, Mecklenburg county, Va.**

SEED CORN

Cocke's Prolific and Eureka.

two best varieties known. Seed carefully selected in the field. Lower ears from husks containing two or more were kept separate. In writing, say whether you want seed from upper or lower ears. See Prof. Massey's article in February number on the "Corn Crop and its Needs." **W. D. Bethel, Wenden, Va.**

Mention **THE SOUTHERN PLANTER** in writing.

RURAL DELIVERY.

Editor *Southern Planter*:

Though "The Sentry" gave us an able article in the January issue of the *Southern Planter* on "Disappointments in Rural Free Delivery"; some of his objections, to that branch of the postal service, strike me as being a little unreasonable.

More over, why claim in one place that the people were compelled to accept rural delivery whether wishing it or not, owing to the closing of post-offices in the rural communities, thus filling the country with excitement and lamentations, and a little lower down in the same article pointing out that very few of the old offices had been actually wiped out and nearly all the *Star* routes retained, thus giving at immense cost a duplicate service?

Since the post offices continue open why Sentry's murmurs of discontent? I see nothing to prevent him from driving over to his dear old office and getting his mail, just as he did before the rural delivery came to cause all those heart-burnings and neighborhood quarrels. Why those heart-burnings anyhow? Is it owing to rivalry among the neighbors, to secure appointments as rural carriers; or does a fear of being compelled to close up, cause the families and friends of post masters to look with sad distrust upon those, who eagerly grasp the benefits of rural delivery? As small offices (the ones threatened with extinction) derive their income from the stamps cancelled, it is only fair to suppose they are still handling enough mail matter to keep up their usual cancellations; for post masters would hardly be foolish enough to run their offices at a continual loss, just "to show the rural" it was not hurting their custom any!"

On the other hand, carriers have to make monthly reports to the Department at Washington of the amount of mail passing through their hands. Is it not safe then to assume that any route, with so few patrons that its carrier went his daily rounds, practically empty handed, would be speedily discontinued. Hence as both rural routes and post offices continue to flourish, we must conclude that both are required to keep up with the rapidly growing mail business.

The boast that the rural delivery would become self-sustaining has been verified to a large extent, owing to the wonderful increase it has brought in trade to the mail order houses, and the way it has swelled the subscription lists of magazines and newspapers. Sentry's complaint that the rural delivery gave favors to a small proportion of the population would of course amount to little, if as he affirms "every man was within convenient distance of a post office."

But I can testify to this being a mistake, from personal experience. And really if it were so why are there so many petitions clamoring for the

NOT ONE CENT

of your money required to own these splendid premiums, or choice of others given for **10¢ SEED**

Just send us your name and address and we send you, all charges prepaid, 34 packets of Vegetable and Flower Seeds. Sell them at 3 cents each, return \$1.00 to us, and we at once send you your own selection of premium from our List sent with seeds. We offer Waists, Skirts, Corsets, Shirts, Table Covers, Jewelry, Hand Bags, Fountain Pens, Knives, Base Ball Goods, Rifles, Boys' Suits, Cameras, etc. All guaranteed as represented or we refund money received for sale of seeds, and present you the seed free.

WE GUARANTEE SEED to be Fresh, Clean, true to name, and unsurpassed in quality by that sold by other seedsmen at higher prices.

Now is the time to sell seeds. Nearly every one buys from \$1.00 to \$5.00 worth of seed each season. You can easily get their order.

**AGENTS WANTED
BIG CASH COMMISSIONS.**

Our seeds are put up in attractive colored pictured packets. Name kinds of seeds wanted—Vegetables, Flowers, or assorted

We Trust You

WITH SEED. Write today for 34 regular, full-size packets, same as we sell gardeners. **SEND NO MONEY.** Twenty-two years reputation.

JOHN R. RISDON SEED COMPANY,
Dep't. 90, Riverdale, Maryland.

RELIABLE SEEDS

—AT—
REASONABLE PRICES.

WE ARE HEADQUARTERS

for
GARDEN SEEDS of the highest quality and germination.

Selected, second crop, Virginia grown and Maine grown.

SEED POTATOES,

ONION SETS, GRASS AND CLOVER SEEDS.

POULTRY FOODS and FERTILIZERS
Send us your orders and you will get good seeds every time. Send us a list of your requirements in seeds and let us quote you special prices.

DIGGS & BEADLES,

... Seedsmen ...

Richmond, Virginia.

Catalogue mailed free.

SEED CORN

Improved **GOLDEN DENT** (yellow), \$1.10 per bushel.

VIRGINIA WHITE DENT \$1.10 per bushel.

HICKORY KING, \$1.10 per bushel.

These are old and reliable favorites. Plant seed that has stood the test of time, and don't run the risk of losing half your crop experimenting. Write for references, sample and further information. **J. F. DURRETTE, Birdwood, Albemarle Co., Va.**

"SUNLIGHT"

SECOND CROP

SEED IRISH POTATOES.

The "Sunlight" potato is more extensively grown in this section than all other varieties combined, and we ship from this station (Toano) yearly from 50 to 75 thousand barrels. As to earliness and productiveness, it surpasses all other varieties. It is a white potato similar to the rose in shape, with most excellent cooking qualities. It produced as much as 112 barrels to the acre her last year when allowed to mature, and brought from 25c. to 35c. per barrel more than other varieties, on home and Northern markets. I have several hundred barrels grown especially for seed purposes for sale.

No. 1 stock, in barrels, at \$2.75, f. o. b. Toano, Va.

No. 1 stock, in sacks of 165 pounds, at \$2.60. No. 2, at \$1.75, in barrels, or \$1.60 in sacks of 165 pounds, f. o. b. Toano, Va.

Order early, as supply may be exhausted.

Address **BRANCH MARTIN.**

Toano, Va.

Holt's Strawberry

SEED CORN.

A large, long, deep grain, white corn, with medium size cob and a few red grains, making white meal. An immense yield on rich land; two ears to the stalk usually; an abundance of fodder. Price, \$1.20 per bushel; 70c. per one-half bushel; 40c. per peck, hand picked. W. B. PAYNE, Crofton, Va.

Pure-Bred

SEED CORN

Limited quantity (selected)

Boone County White

for sale. Write us for prices at once.

PERE WILMER & SONS,

FAULKNER, MD.

SEED CORN For Sale,

White Salamander Selected.

Matures in 90 days, deep grain, white cob, 63 pounds of shelled corn to 70 pounds of ears. Large ear on heavy short stalk, making splendid fodder. The best corn I have ever used, yielding 12 barrels per acre on medium land, \$1.50 per bushel. Cash with order. F. M. MAGRUDER, Eastham, Albemarle county, Va.

OLD-FASHIONED

Peach Blow Potatoes.

\$1 per bushel, bags included

G. W. MOSS, Guineys, Va.

SEED CORN.

I offer a splendid single ear, white corn at \$1 per bushel. Send for sample. M. E. ANDREWS, Hurt, Pittsylvania Co., Va.

SEED CORN.

I have a fine lot of select Boozie's MAMMOTH SEED CORN for sale at \$1.50 per bushel. A. T. BOOZE, Springwood, Va.

GINSING & RAW FURS

Wanted: full value for your goods. Write for price lists. Address: H. C. METCALF, Ailestad, N. H.

opening of new rural routes in all section of the United States, and why so many fresh routes opened each month?

And this happening, too, when "vast multitudes of people are now so greatly disturbed at the ill-advised changes made or threatened that the country is filled with excitement and lamentations!" Very strange, ain't it?

By all means let the routes start from the larger towns. Numerous country offices are too small to allow the carriers desk room even. Besides they are frequently run in connection with a general store, the post master acting also as merchant. Thus the carriers would be liable to interruption by the customers passing in and out, while the city office usually enjoys sole use of a large building; and its employees can handle with ease and dispatch an amount of mail, that would simply bewilder a country post master and his assistant. True, a little practice would render the latter expert too. But in the meantime somebody's important business letter would be delayed or somebody's newspaper go astray altogether, causing a flood of complaints to pour in. So why should Uncle Sam try them, with an ample supply of trained city employees ready at hand.

The fear that rural carriers will "combine" seems to haunt Sentry. But I never heard the argument advanced that city carriers ought be done away with, lest they have unions and combinations. "Oh, no!" is the protest. City carriers have no reason to combine, for they have nice, soft berths already.

Well, then give rural carriers as good pay and light work as their city brothers in the postal service, and thus avoid the dreaded unions. The representative whom Sentry quotes drew a rosy picture, for the carrier, of his future. But in the grim present, the carrier has to furnish his own team, and all feed for it, besides wagon repairs, horse shoes and everything else in that line. Moreover, it is claimed the steady daily round of travel, in all sorts of weather, stiffens up a horse so much, that in a year or two the worn-out animal must be replaced by a fresh one, the carrier of course paying the difference in cost.

How about those millions for overtime? The carrier must be at his desk at seven A. M., ready to sort out his mail for the day. An hour spent in the office, and off he plods on his weary rounds. But woe betide him, if he fails to show up at the office at four. Snows m. y fall and creeks rise yet no matter the state of road or weather, if the carrier is late, it is understood to be in some way his own fault, and he is blamed accordingly. "There must be no overtime for the rural carrier," so say the powers that be. But Sentry's most unjust charge of all is that farmers are compelled to "purchase stamps and money orders, register letters and other things of

Trees - Trees

I offer a fine lot of whole root trees.

**APPLES, PEARS, PEACHES,
CHERRIES, PLUMS, GRAPE
VINES, RASPBERRIES, Etc.**

Save agent's commission by sending your order to the nursery.

CATALOGUE FREE. All Stock Inspected and Famigated.

WERTZ'S NURSERY, SALEM, VA.



Emporia Nurseries

are still offering their high grade trees at reasonable prices, Michel's early Strawberry by 10c0, \$1.00. Shade trees for street and back yard, fastest grower known, 5 to 7 ft., 25 cents. Address for general price list,

EMPORIA NURSERIES,

Emporia, Va.

MERIT ROSE COMPANY,

Richmond, Va.

SPECIALTIES.

Cold Grown, Own Roots, Everblooming Roses and the Best of All Standard Roses, Including Runners.

We desire to please every one, and especially those who cannot visit us and make their own selection. **FREE UPON APPLICATION;** Catalogue containing full directions for Rose Culture.

THE OLIVES STRAWBERRY

that I introduced in 1903 is a wonderful Strawberry; does well everywhere; it is free from rust, blight and all other diseases; every berry "tower" should plant this wonderful berry if you want the best. 45 varieties of choice choice plants true to name. 25 years' experience. Asparagus roots, seed free. J. W. HALL, Marion Station, Md.

For Potato Growers

We have a carload of fine

WISCONSIN SEED IRISH POTATOES

on hand, which we sell in large and small quantities, at very reasonable prices, delivered at any station or landing. **MEYER & JEHNE, Farmville, Va.**

SEED CORN.

I have for sale COCKE'S PROLIFIC and HICKORY KING seed corn. My crops last season averaged from two to three good ears to the stalk. You can do as well. Why plant inferior seed when you can get the best by paying only a little more for it? Price, per peck, 40c.; one-half bushel, 75c.; bushel, \$1.25, f. o. b. Dry Fork, J. NEAL WILLIAMS, R. F. D., No. 1, Dry Fork, Va.

Selected Seed Corn,

yielding 60 to 75 bushels per acre; bred by me. Particulars of same in an article elsewhere in this issue. Limited quantity of seed, \$2 per bushel. WM. S. HUNDLEY, Oxford, N. C.

FOR SALE

229 acres of first class land, including 60 acres of original growth, wood land of oak, pine and cedar, three and a half miles south of Warrenton, Va., county seat of Fauquier county, noted for high class horses; on Southern road, 50 miles of Washington, D. C. Four room dwelling, tin roof, two story barn will stable about ten horses and thirty tons hay; granary, corn house with driveway; hay house, tenant house; well watered; good orchard; convenient to schools, churches, mill house; also rural route; telephone. This land produces finely and accessible to market. A bargain; also 300 acres nice oak timber. Apply to Box 129, Culpeper, Va.

WANTED TO SELL

Farm containing 600 acres of fine land, well fenced with wire and plank, large modern building, lighted with gas, store house, blacksmith and wheelwright shop, fish pond well stocked with fish; have made 5 tons dry hay per acre and 1,600 pounds tobacco an acre. Won silver medal at St. Louis Exposition on leaf tobacco; about 150 acres highly improved land. One-third cash, balance to suit purchaser. Address C. R. SANDERSON, Ashby, Va.

-TIMBER-

Those wanting nice timber for lumber, write me. Those wanting to sell standing timber, list with me. I can sell it. List your farms with me. I sell for 10 per cent. of your price. C. S. LINDLEY, Emporia, Va.

Wanted....

VIRGINIA FARMS.

If you have a well located farm you do not need, it will pay you to give me full particulars. Do it at once. C. E. EVERETT, Hartford Building, Chicago, Ill.

OLD VIRGINIA

FARMS of every description. Good lands. Low prices. Liberal terms. Convenient to churches, schools and railroads. A very mild climate. Write for our new catalogue. CASSELLMAN & CO., Managers, Richmond, Va. P. O. Box 255.

I Can Sell Your Farm....

If located in one of these Virginia counties: Prince George, Chesterfield, King William Gloucester, New Kent, King and Queen Hanover. Send description, stating price.

JOHN JELINEK, 1136 Pine Alley, Braddock, Pa.

WANTED

We want to buy

Some Good Timberland

(White Oak preferred, but also Pine and other kinds of timber), no matter how large and how small tracts are. MEYER & JEHNE, Farmville, Va.

that kind in the public road in all sorts of weather where they previously had a convenient office under shelter."

I gather from this ignorance on Sentry's part that he does not live on a rural route, but a visit to the route nearest to him will show him, that patrons of a rural route have neat, durable mail boxes. The boxes may be had in several styles, all quite reasonable in price and fitted with lock and key, each bearing the owner's name, thus easily enabling a stranger to find the residence of any particular farmer.

When taking out one's mail any day, if stamps are desired, the money is dropped into the box in with a slip of paper bearing the words "stamps and the stamps will be left with the next morning's mail. Or if unstamped letters are put in, with money to pay for their postage, the carrier will put two and two together sufficiently to mail them. A note in the box, asking for an application blank for a money order will cause the carrier to gladly leave one. Then the application properly filled out with the money and required fee has only to be placed in the box to bring the money order itself, while the carrier will promptly register valuable letters or packages, when requested to do it by a note in any patrons box.

In short one need never see his carrier unless the latter has a registered letter for him. Thus in stead of plodding off to the shelter of that convenient office a mile away, and some times a good many miles too, how much better just to step down to one's own gate? where a few moments permits the taking out of the mail or the leaving when desired, money and a note, previously written at the house, of instruction for the carrier.

Therefore but little exposure to the weather, be it what sort it may, is required of the poor farmer.

The rural delivery is bringing about a new era of prosperity for the farmer, no longer compelled to accept local prices for his produce; for a daily mail and a constant supply of papers have put him directly in touch with the markets of the world.

However one may regret the passing away of the genial, gossiping gatherings in the old post offices, where one was wont to lose semi-weekly a half day from work "getting his mail," it remains without question that rural delivery is the greatest boon of the new century to the farmer, giving him the unfailing light that radium gives the scientist.

Romoke.

Chapman—Aw—what natural wit I possess I got from my mother.

Miss Cutt—Oh, come, don't talk that way about your mother.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Northern Virginia Farms

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 5—136 acres; half timber, balance cleared; 1-2 miles from station. Good 7 room house; large barn; good water. Price, \$2,000.

No. 16—130 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$30 per acre.

No. 22—225 acres. Two and one-half miles from station. Forty acres timber, balance cleared. Fine land. In good condition. Good 7 room house. Large barn, etc. Price, \$30 per acre.

No. 40—133 acres; one mile from town, on fine McAdam road. Nice 7 room house, 3 porches. Good well and springs. Good barn with stalls for 10 cows and 5 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land sandy loam and clay. Two acres in orchard; trees in full bearing. Price, \$1,000.

No. 41—26 acres; 10 miles from Washington, D. C.; 2 miles from an electric and steam railroad. Thirteen room house in nice shaded lawn, 2 cellars, well at house. Nice orchard in full bearing. All necessary out buildings in good repair. Price, \$3,500.

No. 43—30 acres; an elegant brown stone house, with 6 rooms, 2 porches. Three acres young orchard in full bearing. All necessary out buildings, in good repair. A large stone mill building, with 2 sets of corn burrs, has 25 foot water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$3,200.

No. 47—100 acres; 2 1-2 miles from railroad; 90 acres cleared, all level and in fine state of cultivation. New 6 room house. Stable for 4 horses and 6 cows. Young orchard. Good well at house. Situated on popular dirt pike, in Loudoun county. Price, \$2,500.

No. 48—226 acres in Loudoun county; 30 acres in hardwood timber, balance cleared and in fine state of cultivation, nearly all in grass. A new 7 room house with well at door; 2 1-2 miles from the railroad. In refined neighborhood. Land smooth and a little rolling. Close to school and churches. Price, \$200 per acre.

No. 50—480 acres in Loudoun county, in the best grazing section of the State, all in grass; 12 room residence, situated on elevated ground in a large shaded lawn. An elegant large orchard in full bearing. Stabling for 60 cattle, farm grazed and fattened 65 export cattle last season. Well fenced, and an abundance of running water. Price, \$440 per acre.

No. 51—215 acres; 25 miles from station. Land all in fine state of cultivation, mostly in grass. Small house on farm. Good well and several never failing streams. Situated on a broad McAdamized pike. Close to schools, churches, and stores. In a refined section. Price, \$2,800.

Write for full information, and price list of other farms.

W. E. MILLER, Herndon, Va.

VIRGINIA ...AND... THE PLACE ...TO... FIND THE BEST HOMES

Where Health, Climate, Soil, Location and markets are unobscured. Any size, place and price to suit the buyer of a stock, truck, fruit, poultry or fish and other farms. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 36 P. pamphlet giving 11 particulars.

W. A. PARSONS, C. & O. Main St. Depot, - - Richmond, Va. ESTABLISHED 1875.

VIRGINIA LANDS

In Rockbridge and Bath Counties

FOR SALE

No. 15.—Fine flouring mill property; building has 7,000 feet of floor space, 100 foot front, on corner Main and Water streets, Goshen, Va., 100 yards from C. & O. R. R.; 40 barrels capacity daily, boiler system; 2 acres town lots, 60x80 feet; lively barn, ice house, wagon, scales, etc. Reasons for selling, short of capital. A bargain at \$12,500; terms to suit purchaser.

37—44 acres nice level bottom sand and clay soil, ¼ mile from Goshen; good 7 room frame dwelling, stable, etc. Price, \$3,250.00. \$2,000.00 down, balance one and two years. Large furnace ½ mile; good market for all truck. A valuable truck farm—a bargain.

11—77 acres fine river bottom, 5 miles from Goshen; good water, good 8 room house, new and nicely located, good barn, 66 acres cleaned, 11 acres in timber; good neighborhood, ½ mile to school and church. This is our best bargain at \$3,000.00, terms to suit.

3750 acres timberland in one body, will sell timber with 10 to 15 years to take off; 10 to 12 miles from R. R.; conservative estimate, 8 million ft. sawed timber; 10,000 railroad ties; 5,000 cords tan bark, and thousands of cords of extract wood. This is the finest body of virgin white oak in Virginia that has not been culled; price \$15,000.00 for timber on easy terms, or \$25,000.00 for land and all.

We have timber lands, farms, town property and all kinds of summer resorts for sale. Write for booklet.

J. W. GUINN, Goshen, Va.

To Home Seekers

"Virginia, Her Agricultural and Industrial Resources,"

is the title of a new pamphlet issued by the Norfolk & Western Railway Co. We will gladly send you a copy. F. H. LA BAUME, Agr. and Ind. Agent, Roanoke, Va.

FINE FARMS in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address ALBEMARLE IMMIGRATION CO., SAN L. B. Woods, Pres. Charlottesville, Va.

Productive Farms, Hanover county, between the mountains and Tidewater. Land and seasons conducive to successful farming. FRANK H. COX, Ashland, Va.

POULTRY TALK.

Editor Southern Planter:

As the long winter goes on, one is forced to notice the fowls with more interest, as cold weather is productive of much harm, especially where large flocks are kept in, possibly too small quarters.

It is a noticeable fact that those known to be interested in poultry find their facilities greatly limited when a long cold spell of weather comes. Too often houses are found too small, and perhaps too open. No scratching sheds, no laying rooms, in short no modern conveniences for the business. We have much to learn from those of the North and West, where men and women, too, find both pleasure and profit in the care of poultry. Here we find men gradually looking towards the improvement of their stock, horses, cows, sheep, and hogs, while their eyes are beginning to see us wrongs in farm management, the higher standards in fruit growing and the hundred and one things an up-to-date farmer should see, but in few instances does this improvement extend to the small affair of poultry keeping—the most of such work being turned over to women, who are more or less dependent upon the stronger sex for the actual work, such as building yards and houses, and cleaning them; consequently we find ourselves behind in this one branch of industry.

There is to my mind nothing more pleasing than a nice farm stocked with all kinds of pure bred animals, horses, cows, sheep, etc., but the picture is incomplete if only scrub chickens are seen, while nothing so evinces the shortsightedness of the farmer. He would scorn the idea of having no eye for beauty, yet he must admit that no beauty is to be seen in a mongrel lot of fowls.

There is always much discussion as to the real profit in poultry raising, and men are generally pleased to say "there is no money in chickens," while if they would only give the question a little thought, the reason for this assertion would be apparent. What would a horse or cow bring to his owner treated as the hens are on most farms?

What gain ever comes from any farm animal that has not systematic care and attention? Why should the hen be put down as a failure when she has such little notice?

When we learn to build larger and more comfortable houses, with scratching sheds attached for snowy days, when we study the needs of chickens in all weathers and provide them, we may hope for better returns. It would be an ungrateful flock indeed that would not supply the good farmer with eggs in plenty with such happy surroundings.

Perfect cleanliness in every particular is a point to be emphasized. Where a flock of hens has had daily

IMPORTANT

To Land-Owners.

Do you realize the importance of having a good map or plot of your land? I make a specialty of copying worn and faded farm, town lot and other maps, and to making maps and plots from metes and bounds as described in deeds. If you want old maps copied, mail to me, or if you want a map made from your deed, copy metes and bounds and mail to me.

DON'T PUT IT OFF.

After you have lost your old maps or they have become too badly torn and faded, it will be too late.

SPECIAL ATTENTION given to surveying and dividing large tracts of land in Virginia and North Carolina. My charges are: For maps, \$2 and up, according to size, and \$1 and up for calculating area. Mail me what you want done, and I will quote you price for same. DAVID T. WILLIAMS, Civil Engineer and Surveyor, 336 Main street, Danville, Va.

HALF INTEREST IN

A GOOD FARM

of 261 acres, FOR SALE. Fine cotton and grain farm; would like to sell to some one who will go into the cattle and poultry business and take charge of and run farm, etc. Cheap to the right man.

Price, \$3 per acre, half cash and balance in 2 to 4 years. Better inquire about this bargain at once. J. F. CLYBURN, Box 95, Lancaster, S. C.

VIRGINIA PROPERTY

FOR SALE ON EASY TERMS.

Fine 228 acre farm, \$9,000. House, 3 tenant houses, large basement, barn, silo, ice house and dairy outbuildings; good fence; plenty fine water; 23 milk cows, bull, 5 heifers, 2 horses and 3 wagons; all kinds of machinery, separator and dairy equipment. \$200 income a month. If sold right away will take \$9,000 for everything just as it stands stacked, or will sell on easy terms. One mile from railroad station and small town. Send for catalogue of 50 other farms, \$500 up. All the above in near steam and electric railroad, and near Washington, D. C. J. F. JERMAN, Fairfax, Va. Phone connection.

I Can Sell Your Real Estate or Business, NO MATTER WHERE LOCATED.



Properties and business of all kinds sold quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same.

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Grain, Fruit, Dairy and Blue Grass Farms of every Class within one hour of Washington, D. C.

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Farms a Specialty

Catalogue on application.

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Real Estate Brokers,
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The best locations, choicest lands in Virginia. Grains, Grasses, Fruit, Poultry, Dairy Stock. For catalogue and further information, address

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Home for ALL: Health for ALL: Happiness and Independence for ALL. All sizes of FARMS at corresponding prices, but ALL reasonable.

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VIRGINIA FARMS

\$3 PER ACRE AND UPWARDS.
EASY PAYMENTS. CATALOGUE FREE
GEO. E. CRAWFORD & CO., Richmond, Va.
Established 1872.

Go South.

For full particulars write
A. JEFFERS,
Norfolk, Va.

WANTED

Nice little poultry farm, 100 acres, good house and orchard, \$500.00. Blue Grass, Stock and Fruit Farms. Address PORTER & GATES, Louisville, Va.

WANTED

To purchase good second-hand
PORTABLE SAW MILL
output, not less than 20 horse power.
ROYAL R. SCOTT, South Boston, Va.

SPRAY
FORCE PUMP
HAS NO EQUAL
PRICE REASONABLE
CATALOGUE FREE
AGENTS WANTED
THE HOIL MFG. CO.
333 MAIN ST.
BUFFALO, N.Y.

FIRE

"Crop Growing and Crop Feeding."

By PROF. W. F. MASSEY.
383 Pp. Cloth. \$1.00; Paper, 50c.

We offer this splendid work in connection with the SOUTHERN PLANTER at the following prices:

Southern Planter and Cloth Bound Volume, \$1.25.

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attention, good clean food and water, there is little need for condition powders or egg producers. These are really medicine for neglected chickens and should not be necessary where proper attention is given.

The use of green cut bone is not overated. It is a great egg stimulator, and should be given only twice a week, in small quantities, possibly two ounces to a fowl. Much can be said on this time-worn subject of poultry keeping, and to one who has experienced new things come up, and whenever possible, they should be passed along. May the day be near at hand when this uncultivated field of industry shall receive its proper share of attention, and the much abused hen be able to crow over her high estate.

Mrs. Jno. F. PAYNE.

Albemarle County.

LIME-SULPHUR WASH FOR THE SAN JOSE SCALE.

Editor Southern Planter:

Our experiments with caustic soda during the past year indicate that it was almost useless against the San Jose scale. Used at a strength of 1 1-2 pounds to one gallon of water, it proved ineffective against this pest, while it injured young apple trees seriously. It was also found that none of the patent washes known to us could compete favorably with the cooked lime-sulphur wash in cost and efficiency. For formula and method of preparation and application of the lime-sulphur wash, see bulletin 141 of the Virginia Experiment Station.

Recent quotations from wholesale druggists indicate that sulphur can be obtained in barrel lots at 2 1-2 to 3 cents per pound, and as lime is cheap, this wash can be prepared at reasonable cost. Growers should send in their orders for sulphur as soon as possible, in order to get it at a reasonable price and avoid delay.

We wish to impress upon fruit growers the necessity of cooking this wash vigorously for at least thirty-five to forty minutes. While the so-called uncooked wash can be prepared in covered barrels with hot water and the heat generated by the slaking lime, much of the sulphur is left undissolved, producing a very poor wash. Besides it is necessary to heat the water, and in this way practically as much time is consumed in preparation, as in the regular method of cooking over a fire. All things considered the method of cooking over a fire is by far the most certain and reliable method for preparing this wash.

The addition of caustic soda to either the cooked or uncooked wash, while adding considerably to the cost, has not proven of any practical value in our work, and is not recommended.

J. L. PHILLIPS,

Entomologist.

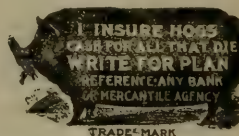
Virginia Experiment Station.

In writing mention Southern Planter

IT WILL NOT COST YOU ONE CENT

If you do not see beneficial results. Any reader of this paper remitting direct to me for a can of half can of my Hog Remedy at below prices, and giving same a fair trial for 30 days, may at that time have his money refunded if he is not satisfied that his hogs have been benefited, and that it will do all that I claim for, and that it is the best hog remedy he has ever used.

CASH FOR HOGS THAT DIE.



Dr. Haas' Hog Remedy

PREVENTS AND ARRESTS DISEASE. STOPS COUGH, EXPELS WORMS, AND PAYS FOR ITSELF MANY TIMES OVER WITHOUT EXTRA FEED. It is the pioneer and peer of all preparations on the market for hogs—23 years' success.

Prices: 25-lb. can, \$12.50; half can (12 1/2-lb.), \$6.50, prepaid; packages, \$2.50, \$1.25 and 50 cents each. None genuine without my signature on package or can label.

HOG BOOK FREE!

Latest revised edition "Hogology," my book about hogs, will be sent FREE if you mention Southern Planter when asking for it. Many new and important subjects have been added and every phase of swine raising, from start to finish, is covered in a thorough and practical manner. WONDER VERMIN KILLER kills lice and vermin on poultry and stock, 25 cents per box; mailed, 35 cents.

JOS. HAAS, V. S., Indianapolis, Ind.

WANTED!

ALL KINDS OF
LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

DR. CECIL FRENCH,
718 Twelfth St. N. W., Washington, D. C.

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Prof. Henry's Great Book for
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With the SOUTHERN PLANTER, 2.25

OPIUM and Whiskey Habits cured at home without pain. Book of particulars sent FREE. R. M. Woolley, M.D., Atlanta, Ga., 103 N. Pryor St.

SPAVIN

Bone Spavin, Bog Spavin, Ringbone or any kind of bluish—we have what you need to make a certain cure. Guaranteed always—money right back if it ever fails.

Fleming's Spavin Cure (Liquid)

for the soft bunches—Paste for the hard ones. A 15-minute application and the lameness goes. Lots of blue and information in the free book we send.

Fistula and Poll Evil

Do yourself what horse doctors charge the price for trying to do. Cure Fistula or Poll Evil in fifteen to thirty days.

Fleming's Fistula & Poll Evil Cure

is a wonder—guaranteed to cure any case—money back if it fails. No cutting, no scar. Leaves the horse sound and smooth. Write for our free book on diseases and blennies of horses.

FLEMING BROS., Chemists,
280 Union Stock Yards, Chicago, Ill.

USE DR. TURNBULL'S CURINE

The Great American Veterinary Remedy.



A SAFE AND POSITIVE Cure for Spavin, Splints, Curbs, Ringbone, Bony Growths, Rheumatism, Sprung knees, Lameness of all kinds, etc.

It is the most powerful paint known, and supersedes all Caustic or Firing.

NO HAIR GONN!

Its effects are ABSORBENT, ALTERNATIVE, PENETRATIVE and ANTISEPTIC, and it will reach the deepest seated trouble. For sale by all dealers.

H. S. BOSSART & CO.,

430 Fourth Ave., PITTSBURG, PA.

Price: Large Bottles, \$2; Small Bottles, \$1.

Send 2c. stamp per our 96 page Little Giant up-to-date book on the principal diseases of the horse, causes, symptoms and treatment, with testimonials and directions for CURINE

Kendall's Cures



Spavin, Ringbone, Splint, Curb and all forms of Lameness.

STANDS AT THE HEAD.

Kerstington, Minn., March 28, 1904.

DR. E. J. KENDALL CO.
Dear Sirs—Will you kindly send me one of your books entitled "A Treatise on the Horse and his Diseases?" My experience teaches me that Kendall's Spavin Cure is a liniment for man and beast stands at the head. Yours truly, HANS WOLFE.

That is the experience of every user of Kendall's Spavin Cure. Price \$1; 6 for \$5. Unequaled as a liniment for family use. For sale by your druggist. Ask him for a free copy of "A Treatise on the Horse and his Diseases?" or write

DR. E. J. KENDALL CO., ENOSBURG FALLS, VT.



KENTON'S Heave, Cough, Dis-temper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per bottle. 12 for \$10.00. Sold by The Newton Remedy Co., Toledo, Ohio.

NO MORE BLIND HORSES.

For Specific Optaalmia, Moon Blindness, and other Sore Eyes, Barry Co., Iowa City, Ia. have a sure cure.

WITH THE ADVERTISERS.

Swift's Arsenate of Lead is advertised in this issue by the Merrimac Chemical Co.

An excellent fertilizer distributor is offered by the Belcher & Taylor A. T. Co. Look up the advertisement.

The Dayton Supply Co. are newcomers in this issue. Spray pumps and supplies are their offerings.

The Ohio Carriage Mfg. Co. have a very attractive advertisement of their split hickory buggies on an another page.

The Hensch & Dromgold Co. have a couple of advertisements in this issue. We invite the attention of our readers to them.

Kemp & Burpee Mfg. Co. starts the season's advertisement of their celebrated Kemp's manure spreader in this number.

The Chicago House Wrecking Co. have several advertisements in this number, to which we invite attention. This company has recently purchased the St. Louis Exposition. Farmers will have little trouble in picking up hundreds of bargains in roofing, plumbers supplies, etc.

Look up the advertisement of the Fauquier Keystone Corn Planter.

Wasson Stanchion Co. offers excellent cattle stanchion to our readers.

The new idea in trunks is advertised by the H. D. Thacker & Co., Petersburg, Va. We invite particular attention to their advertisement.

The Brown Mfg. Co., makers of the Brown wagon and other farm implements, have several advertisements in this issue. Parties contemplating purchasing wagons, cultivators, harrows, etc., should be sure to refer to these advertisements first.

Palmer Bros. are new advertisers in this issue. They are offering gasoline engines of various styles and sizes.

J. J. Jordan & Sons are offering French coach and Percheron horses in an attractive advertisement on another page.

Hoff Mfg. Co. are offering our readers its spray pump again this season.

The Smith Manure Spreader Co. has a large advertisement elsewhere in this issue, to which we invite attention.

Sure Hatch Incubator Co. is getting right after business of the poultry men of this section, as evidenced by their large and attractive advertisement elsewhere in this issue.

A handsome box for letters and jewelry is offered by Brauer Chemical Co. as a premium for introducing their ivory white baby cream.

Ruby, who was dining with her elders, was given her choice of her favorite desserts.

"Which will you have, Ruby, ice-cream or jam?" her indulgent father asked.

After a moment's hesitation she said, "Give me a little of each and a lot of both."—February Lippincott's.

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. If send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.



ONSTAD'S

LUMPY-JAW

CAPSULES.

No imitation, but the original magic-like-one-application-cure. Stood test for 16 years. Absolutely guaranteed. Agents wanted in every county. Write for further free information. THE ONSTAD CHEMICAL CO., Room 1, Indianapolis, Ind.

Stock For Sale.

¾ and 15-16 GRADE ANGUS Bull and Heifer Calves.

1 BULL CALF out of Shorthorn Cow, by Angus Bull.

1 splendid 6 year old BAY MARE, weight 1,200 pounds, quick, active and a good driver. Price, \$150.

1 pair of Blocky, WELL BUILT MULES, 5 years old, well broken. Price, \$300.

Pure Bred POLAND CHINA PIGS, \$5 each. WHITE PLYMOUTH ROCK and SILVER LACED WYANDOTTE eggs.

W. M. WATKINS & SONS, Saxe, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

HOLLYBROOK FARM.

Barred Plymouth Rock Cockerels.

We have a fine lot of young cockerels for sale; healthy, vigorous birds. Careful attention has been paid to cross-breeding and selection of our Barred Plymouth Rocks, and we do not believe there is better laying, more vigorous and healthy stock anywhere in the country. Our cockerels are just the kind of stock poultrymen like to get to infuse new blood into their flocks. Price of cockerels, \$1.50 and \$2 each; the latter price for extra select cockerels. Price includes crates and delivery to Express Co.

EGGS FOR SETTING, \$1 per setting of 13 eggs.

We have also a few first class WHITE and SILVER LACED WYANDOTTE COCKERELS; price, \$2 each.

PRICE OF EGGS FOR SETTING: WHITE and SILVER LACED WYANDOTTE, \$1.50 per setting of 15 eggs.

HOLLYBROOK FARM,

P. O. Box 330.

Richmond, Va.

Richmond's Best Breeds

won at Hagerstown, Richmond and Atlanta. Eggs from prize winning

WHITE, BUFF AND BROWN LEGHORNS, WHITE AND BLACK MINORCAS, B. P. ROCKS.

FLYING HOPPER PIGEONS,

each variety raised by a SPECIALTY BREEDER on his own yard. C. G. M. FINK, R. F. D. 2, Richmond, Va., representing Richmond breeders.

CHOICE EGGS AND FIRST-CLASS STOCK

White Wyandottes, laes "Invincible" and Biltmore strains. Barred P. Rocks, famous Thompson "Ringlets."

Rose Comb White Leghorns, Babcock and Biltmore strains. Silver L. Wyandottes, combination strains. From prize winners and best winning blood. Bred for beauty and utility. Prices to suit and quality the best. Eggs and stock for sale. Eggs carefully packed in patent carriers. Stock carefully crated. Prompt, personal attention, 5 extra choice White Wyandotte cockerels and 3 R. C. W. Leghorns cockerels, "Snow Balls," for sale, yet to quick buyers. Write me your wants and get my prices to-day. E. C. NEWTON, Prop., P. O. Box 250, Dayton, O. McCall, S. C., R. F. D., No. 2.



BARRED PLYMOUTH ROCKS, PARTRIDGE COCHINS, B. R. RED GAMES, S. C. WHITE AND BROWN LEGHORNS, S. C. RHODE ISLAND REDS, choice stock, for sale. Eggs \$1 for 13; \$1.75 for 30.

RIVERSIDE POULTRY FARM,
J. B. Coffman & Sons,
R. F. D. 19, Dayton, Va.

HINTS BY MAY MANTON.



4942 Wrapper or House Gown,
32 to 44 bust.

TO BE MADE WITH OR WITHOUT THE
FITTED LINING.

House gowns that are tasteful and comfortable in one are among the necessities of the up-to-date woman's wardrobe. This one is admirable and can be made with a lining that extends to the waist line or without, the full portions being joined to the yoke, as may be preferred. In the case of the model, the material is ring dotted chalice trimmed with bands of velvet ribbon, but all materials in vogue for gowns of the sort are appropriate, and the model makes an excellent one for the many washable fabrics of warm weather.

The wrapper is made with the fitted lining, which is faced to form the yoke, fronts and back, these last being gathered and arranged over the lining on indicated lines, or joined to the yoke when the lining is omitted. The sleeves are full at both shoulders and wrists are finished with straight cuffs. At the neck is a turn-over collar.

The quantity of material required for the medium size is 9 yards 27, 8-1/2 yards 32, or 5-3/4 yards 44 inches wide, with 9 yards of banding to trim as illustrated.

The pattern 4942 is cut in sizes for

... WHITE ...

Plymouth Rocks

Eggs for hatching from large pure white, extra good stock. Only a few good cockerels for sale. S. C. BROWN LEGHORNS. R. W. HAW, Jr., Centralia, Va.

A FEW CHOICE

Barred Plymouth Rock

Cockerels, pairs, trios and pens. Mated for best results. B. P. R. EGGS by the sitting or hundred; also PEKIN DUCK eggs. I have been in business for 17 years, and my birds are high bred and give satisfaction, which I guarantee. CHARLIE BROWN, Arlington Farm, Cartersville, Va.

Buff Plymouth Rock

cockerels or hens for sale. Also eggs of the finest mating. Pedigreed BELGIAN HARES from imported stock. Address J. M. WILHELM, Statesville, N. C.



BARRED-PLYMOUTH ROCK EGGS

\$1 for 15.
My yards contain the same blood as the world-renowned prize-winners, and I can furnish either THOMPSON or HAWKINS strain.
Address C. DANNE, Jr., Proprietor or JOHN MAHANES, Manager, Trevilian, Va.

E. F. SOMMERS, - Somerset, Va.

Breeder of the finest line bred

Barred Plymouth Rocks

exclusively for 15 years. Write to me for what you want. Am sure can please you. My birds have been bred for laying qualities as well as shape and plumage. Cockerels and pullets, \$1 to 2; eggs, \$1 per set of 15; 2 sets, \$1.50; M. B. Turkey eggs, \$3 per doz.

EGGS AND FOWLS.

BARRED RUFF AND WHITE PLYMOUTH ROCKS, SILVER, WHITE BUFF and PARTRIDGE WYANDOTTES, BLACK MINORCAS, BLACK LANGSHANS, LIGHT BRAHMS, BUFF and PARTRIDGE COCHINS, WHITE and BROWN LEGHORNS.

EGGS, 15 for \$1; two-thirds hatch guaranteed or sitting duplicated at half price. OAKLAND POULTRY FARM,
C. J. WARINER, Mgr., Ruffin, N. C.

PURE BRED

BARRED PLYMOUTH ROCKS,

exclusively. Strong, healthy, vigorous farm raised stock, bred for laying. Eggs, 75c. for 15. WM. B. LEWIS, Irbry, Nottoway Co., Va.

Barred Plymouth Rock

EGGS for hatching, carefully packed \$1.00 for 15; \$1.75 for 30; \$2.25 for 45 and \$4.00 for 100.

MRS. CLARA MEYER Farmville, Va.

This May Interest You.

★ ★ ★ MY BARRED ROCKS ★ ★ ★
Are stock-improving, blue-barred-to-skin kind. Closely related to New York Prize Winners. Eggs in season. L. W. WALSH, Box 194, Lynchburg, Va.

♥♥ EGGS FOR HATCHING. ♥♥



15 for \$2.
B. P. Rocks (Bradley Bros. birds), worth \$6 sitting
Also S. C. B. Leghorns, 15 for \$1.50.

Our birds in respect to size, beauty of mark and as layers, are the finest to be found anywhere without exception. From stock that has taken more first prizes than any birds in this country. Try a sitting. Stock for sale.

STRAWBERRY HILL POULTRY YARDS,
Box 257, Richmond, Va.

32, 34, 36, 38, 40, 42, 44-inch bust measure.



4948 Misses' Bucked Five Yoked Skirt
to 15 yrs.

Skirts slightly bucked and shirred at their upper edges to give a yoke effect are among the latest shown for young girls, and are singularly attractive and becoming. This one is laid in three tucks of generous width and is well adapted to all seasonable materials, the many washable ones as well as wool and the like. As illustrated, however, it is made of royal blue canvas veiling stitched with silk.

The skirt is cut in five gores, which provide sufficient fullness at the upper edge, with graceful and becoming folds at the lower portions, and are so shaped as to launder with success.

The quantity of material required for the medium size is 5-3-4 yards 21, 5-3-4 yards 27, or 3-1-2 yards 44 inches wide.

The pattern 4948 is cut in sizes for girls of 12, 14 and 16 years of age.

We can supply these patterns at 10 cents each. Address our business office.

SOUTHERN PLANTER,
Richmond, Va.

SAND-PAPERING YOUR FACE.

You can get the hair off from your face with sand-paper. Probably you will lose the skin and a lot of bad language at the same time. For the purpose of shaving, common toilet and laundry soap is not much better than sand-paper. The hair comes off after a fashion, but your face is left red, sore and irritated. For easy and luxurious shaving you need a special soap. Williams' Shaving Soap is made for the face. Send to the J. B. Williams Co., Glastonbury, Conn., for a free trial sample as per their offer in another column. You will see that there is as much difference between real shaving soap and ordinary soap, as there is between a Kentucky thoroughbred and a truck horse.

Buff Orpingtons.

EGGS FOR HATCHING.

Prices very reasonable. Send for circulars giving prices, together with a few testimonials and references. T. M. KING, Queensland Farm, R. F. D., Hagan, Va.,

Buff Orpingtons

Exclusively.

We breed exclusively SINGLE COMB BUFF ORPINGTONS of the highest class. Our birds were hatched from eggs from imported fowls, and they are buff to the skin. We have been breeders of pure bred fowls for seven years, and have discarded all the "Orpington," as we believe they are the greatest fowl to-day.

We are now booking orders for eggs, 15 for \$1.50, 30 for \$2.75. We have a few cockles left from imported fowls \$1.50 to \$2 each. Send for circular. Address and make all orders payable to B. O. POULTRY YARD, Mitchell, Va.

Golden Buff Orpingtons.

The originators call them "MONEY MAKING ORPINGTONS."

We have a few tricos for sale, \$7, \$8 and \$9. Cockerels, \$1.50 to \$3 each. Eggs that hatch \$1.50 per 15; \$4 per 50. Best hatch gets a fine pair Orpingtons free. Sure Hatch Incubators and brooders for sale. Pedigreed Poland Chicks and pullets and some. O'CONNOR FARM, Jeffers, Mecklenburg Co., Va.

A FEW COCKERELS AND PULLETS OF S. C. B. ORPINGTONS and W. WYANDOTTES.

Get your Turkeys early and you will get double as many eggs. None better than OAKSHADE M. B. TURKEYS. Send for price list. HUGENOT POULTRY YARDS, Dublin, Va.

FIRST CLASS

EGGS and STOCK

My prices will please all as will the quality. Some first prize birds in my flock. BUFF and WHITE ORPINGTONS, WHITE and BROWN LEGHORNS, GOLDEN, SILVER and WHITE WYANDOTTES, B. P. ROCKS, LIGHT BRAHMAS and S. S. HAMBURGERS. I sell a splendid Brooder at \$3.50.
O. E. SHOOK, R. F. D. 1, Waugh, N. C.

20 CHOICE

S. C. BUFF ORPINGTON Cockerels from \$1.50 to \$2.50 each. Eggs, \$1.50 a sitting of 15. PURE BLACK LANGSHANS, in pairs, \$3; tricos, \$4; eggs, \$1 for 13. Shipped from Jeffers, Va., So. R. G. W. Hardy, Oakley, Va.

Eggs for Sitting.

B. & W. S. C. Leghorn eggs, \$1 for 15; also young cockerels \$1 each, for sale. P. J. HOLMES, Ivor, Va. N. & W. R'y.

EGGS FOR SITTING

from pure bred poultry—Barred Plymouth Rocks, Rose Comb Rhode Island Reds, Buff Orpingtons, White Wyandottes, S. C. White Leghorns. Fine lot of Cockerels and pullets for sale. RIVERSIDE POULTRY YARDS, G. H. SHOOK, Prop., R. F. D. 1, Eufoia, N. C.

B. P. R. EGGS

from best strains, farm grown. No other breed kept. New blood annually. 50c per sitting of 15. \$3 per hundred delivered, securely packed, f. o. b. in Bedford City, Va. Mrs. WM. P. BURKS, R. F. D. No. 1, Bedford City, Va.

W. P. ROCK

Cockerels and eggs; also pure bred CHES-TER WHITE PIGS. JOHN A. CLARK, Malvern Hill, Va.

Barred Plymouth Rock Cockerels.

Thompson, Bradley Bros., and Hawkins strains, at farmer's prices. Eggs for hatching. DUROC-JERSEY pigs from best registered stock. LESLIE D. KLINE, Vaucluse, Va.

Barred Plymouth Rocks

—AND—
S B. C. Leghorns,
laying strains. A few more grand Cockerels for sale. Satisfaction guaranteed. Mrs. JNO. F. PAYNE, Clairmont Dairy Farm, University of Virginia.



Valley Farm.
S. C. B. Leghorns.
(FORSYTH STRAIN)
BARRED ROCKS.

Stock and Eggs which will please you for sale. Write me your wants. CHAS. C. WINE, Mt. Sidney, Va.

Eggs

of pure bred B. P. Rocks and S. C. B. Leghorns for sale; 15 for \$1; 30 for \$1.75; 45 for \$2. A few nice cockerels left. M. E. ANDREWS, Hurt, Pittsylvania Co., Va.

Eggs and Stock For Sale.

Eggs, \$2 per 15. Hens and Cocks, \$2.50 to \$5, according to quality. Pure bred laying and exhibition strains, deep Barred Plymouth Rocks, Silver Pencilled Wyandottes and Brown Leghorns. When ordering eggs or stock, state if the birds will be wanted for laying or exhibition purposes. TIDEWATER POULTRY YARDS, THOS. P. ROSE, Mgr., Shiloh, Va.

...Pit Game Eggs...

HICKORY MILLING CO., - HICKORY, N. C.

EGGS! :- EGGS!

Rose Comb White Leghorns are the best for eggs winter and summer. Eggs, \$1 per 15; \$4 per 100. White Holland Turkey eggs, \$2 per 10. MRS. LIZZIE DYER, Versailles, Tenn.

30 S. C. B LEGHORN

Eggs, \$1.100 for \$3.25. 15 Barred P. Rock Eggs, \$1. Fox Hounds, Fox Terriers, Poland Chinas and Berkshires. Catalogue, J. D. STODGHILL, Shelbyville, Ky.

EGGS White Holland Turkey, \$2.50 per dozen.
White Plymouth Rock, 75c. per 15.
G. W. MOSS, - - Guineys, Va.

LANDOR POULTRY YARDS,

Crofton, Va., offer for sale eggs of M. BERRYMAN'S and BARRED PLYMOUTH ROCKS and WHITE WYANDOTTE chickens. Book your orders now. MISS CLARA L. SMITH.

WYANDOTTE EGGS.

WHITE WYANDOTTES—the "all-purpose" fowl. Eggs, 15, \$1. PARTRIDGE WYANDOTTES—the "all purpose" and "Beauty Bird." Eggs, 15, \$1.50. All carefully selected and mated. A. C. BERRYMAN, Churchland, Va.

Rose Comb

WHITE LEGHORNS and WHITE WYANDOTTES for sale. Good stock. Eggs in season. \$1 for 15. J. W. NICHOLS, Grove, Va.

S. B. C. Leghorn

Cockerels at \$1. They are perfectly bred. Could be no better. Orders booked for eggs. 15 for \$1. Seed Potatoes for sale. W. S. GUTHRIE, Childress, Va.

PIT GAMES

Black Devils and Red Cubans.

Where they won, Sharon, N. Y., 4 out of 5 Blue Rock, Pa., 2 out of 3. Clarion, Pa., 3 straight. Reanoke, Va., 3 out of 9. Akron Ia., 2 straight. Eggs, \$1 per sitting. Young chicks, quiet sale, \$3.

THOS. W. JARMAN, Yancey Mills, Va.

Eggs For Hatching

\$1 for 15. Black Minorcas, Black Langshans, Barred and White Rocks, Light Brahmas, S. L. Wyandottes, S. C. W. Leghorns, S. and R. C. B. Leghorns. A few more S. L. Wyandotte cockerels for sale, \$1 each. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

SILVER-LACED

WYANDOTTES.

Strong, healthy, farm-raised birds. Oris-rain line plumage—Cockerels, \$1.35; a few trios, \$1. Order early so as to get best quote. Satisfaction to every customer or money refunded. Eggs in season, \$1.00 per sitting.
Dr. H. H. LEE,
R. F. D. No. 2, Lexington, Va.



GOOD HOUSEKEEPING.

Boiled Turkey or Chicken.

Just at this season there is often an old rooster or gobbler left on hand, and we dread killing it because we know it will be tough. Now, if you will take that old gobbler and give him about a dose of vinegar about a half cupful six hours before you kill him, it will help matters, then you may keep him for a day or two before cooking. Then make a dressing of bread crumbs, butter, celery-seed, salt and pepper, and a little bit of sage. Plump the fowl and stuff it both in the body and crop, tie it up in a towel and put it in a pot with enough water to cover. Boil gently for several hours. Of course, it depends on the size. Take off towel and arrange it on a dish with hard-boiled eggs pressed over it through the potato press, and parsley or celery tops around it. Make the gravy of some of the stock thickened with flour and seasoned. Serve with boiled rice.

Croquettes of Left-Overs.

Possibly you have a few scraps of ham, steak and beef left from several meals. None of them is enough to make a dish by itself, but if ground up and mixed up they will combine into delicious croquettes for lunch or tea. Always grind some stale bread with the meat and season it all with pepper and salt, celery-seed and pepper vinegar or tomato catsup. Put on the stove a pint of milk or stock, (sometimes I use plain water), to every three pints of meat. Make a thick dressing with a half cup of flour, one egg, and a large spoon of butter, pour this hot on the meat and set it back on the stove for a few minutes. When it is cold form the croquettes with your hand into egg shaped balls and fry in hot lard or drippings.

Macaroni and Cheese.

To have the macaroni cooked perfectly it must be put into boiling water and allowed to remain long enough to swell and become tender without softening it. Twenty minutes is the general rule, and even that is longer than is necessary sometimes. Drain off the water and put a layer of the macaroni in the bottom of the pudding dish with salt and pepper and slices of cheese on it, then a layer of the macaroni, and so on till the dish is full. On top put a generous supply of butter in small dabs, and fill the dish two-thirds full of milk, or the water in which the macaroni has been cooked. Put into the oven at once and cook half hour.

Macaroni and Tomatoes.

Cook the macaroni as above suggested, and when arranging in the dish add a layer of canned tomatoes and a few shavings of onion and a sprinkling of cracker or stale bread crumbs, alternating with the macaroni and a dust of red pepper. In this way you can sometimes combine two left-over dishes and make a new dish for the next day. The onion must be very stingily meas-

MRS. W. F. ALLEN,

BREEDER OF

S. C. WHITE LEGHORNS, Exclusively.

\$1.00 per sitting of 15 eggs.

EWING, VA.



"The hen that lays is the hen that pays"

White Wyandottes.

EDGEWOOD STOCK FARM.

This breed exclusively. We can offer you in the Edgewood strain something profitable. Better try us. Pullets all sold. It is eggs and cockerels now. Special offer on five fine cockerels. It will pay you to write me about them. H. B. ARBUCKLE, Maxwelton, W. Va.

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POULTRY



Worth dollars in thousands of homes. Tells you how to treat diseases, feed and care for Poultry with success. It illustrates and tells all about over 45 varieties farm raised THOROUGHbred FOWLS, and quotes most reasonable prices on stock and eggs. Mailed for \$c. in stamps.

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Box L, Harrisonburg, Va.

EXPRESS AGENT HARRISONBURG, VA.

To whom it may concern:—Mr. J. E. Heatwole, breeder and shipper of fancy poultry, is personally known by me, and by the public generally. He is thoroughly reliable and can be depended on. Yours truly,
GEO. E. SHUE.

S. C. W. LEGHORNS

EVERLASTING LAYERS.

Cook direct from Wyckoff, mated with pullets hatched from Wyckoff eggs positively no inbreeding. Eggs \$1.15. 3 Cockerels for sale from above hatch \$1.00 each.

There's more in the strain than in the breed. Address
COTTON VALLEY FARM,
Box 183, Taboro, N. C.



OAK GROVE STOCK

AND

POULTRY FARM,

Offers for sale EGGS FOR HATCHING BARRED, BUFF, WHITE ROCKS, SINGLE COMB BUFF ORPINGTONS and S. L. WYANDOTTES. Eggs, \$1 for 15; \$1.75 for 30. Free circular. My motto is, "Honest dealing and prompt shipments." J. B. BEAMER, Pickaway, W. Va., Breeder of Fancy Poland-Chinas sixteen years.

HIGH-CLASS

BUFF WYANDOTTES.

EGGS FOR HATCHING,
\$1 per 15; \$2.75 per 50; \$5 per 100.
All eggs guaranteed fresh and true to name.

PULLIES, \$1.25 each.
COCKERELS \$2.00 each.

Muddy Creek Poultry Farm,
W. M. HEATWOLE, Hinton, Va.



EGGS FOR SITTING

From pure bred WHITE WYANDOTTES and BUFF PLYMOUTH ROCKS. \$1 for 15, or \$1.75 for 30. DIAMOND POULTRY FARM, S. W. PULLIAM, Prop., King, N. C.

"Business Fowls."

That is What Ours Are.

S. C. WHITE and BROWN LEGHORNS, WHITE WYANDOTTES, BARRED PLYMOUTH ROCKS. Eggs for hatching, \$1 per 15. Guaranteed pure and true to name. FIEDMONT HEIGHTS FARM, F. C. LOUHOFF, Propr., Yancey Mills, Va.

White Wyandotte Eggs FOR HATCHING.

When you are needing Eggs, and want them to hatch, write me. I have discarded all others for this valuable breed. Incubator Eggs furnished on short notice.

G. P. POINDEXTER,
Breeder of White Wyandottes,
Greenelee, Rockbridge Co., Va.



Single-Comb

Brown Leghorn

EGGS for sale cheap.
Satisfaction Guaranteed.

WRITE FOR PRICES.

MEHERRIN POULTRY FARM,
BRANCHVILLE, VA.

WHITE HOLLAND

tom and hen for sale. Fine W. P. ROCK COCKERELS and eggs for sitting; also 6 pure bred CHESTER WHITE pigs. JOHN A. CLARK, Malvern Hill, Va.

COCKERELS.

A few choice B. F. Rock, White Wyandotte and S. C. B. Leghorns, also Leghorn Hens. Some large handsome M. B. Terns. All of due pure bred stock. Write

MISS CLARA L. SMITH,
Croxtan, Caroline Co., Va.

ured, as you only want the flavor "half guessed."

Tomato Jelly.

Stew a quart of canned or fresh tomatoes until they are soft enough to be put through a sifter or fine sieve, season with salt and pepper. Soak nearly a half box of gelatine in a cup of water for several hours beforehand, and add this to the hot tomatoes, stir until thoroughly dissolved; add a tablespoon of sugar and a dash of cayenne pepper. Pour it into small cups or molds and let it stand until the next day. Arrange on lettuce leaves and serve in individual saucers as a salad.

Tea Biscuit.

These take the place of tea cakes when eggs are impossible. One quart of flour, a cup of milk, a large spoon of lard and one of butter, one teaspoon of baking powder and one of salt. Roll very thin and brush over the top of the sheet with melted butter, then sprinkle sugar over it and grated nutmeg. Cut into squares and bake quickly.

Tea Cakes.

One quart of flour, one teaspoon of soda, the yolks of two eggs and a cup of buttermilk, a cup of lard and butter mixed. Roll thin and cut into shapes; cook quickly. The whites of eggs make tea cakes hard, and they may be saved to ice the tops of the cakes with if you want them to use for any special occasion. Put a dab of apple jelly in the center of each cake and cover it with icing, made with the whites and two sups of powdered sugar beaten together; season with lemon.

White Cake.

Two cups of butter, four cups of sugar, two cups of milk, eight cups of flour, the whites of twelve eggs, two teaspoons of soda and four of cream tartar. Cream the sugar and butter till light and add the milk slowly. Beat till smooth and season with bitter almond. Add the flour, which has had the soda and cream tartar sifted in it three times, and the whites of eggs alternately. Mix quickly and bake in layers. Fill with icing or acid jelly.

Lemon Ice.

With a sharp knife peel off the yellow rind of nine lemons, taking care not to cut any of the white part of the rind (that is bitter). Take four heaping tablespoons of cornstarch and wet it with cold water, pour over this boiling water until it is clear, put the yellow skins in and add eight cups of sugar; add cold water enough to make seven quarts, and add the lemon juice and freeze. Of course, if the lemons are small or not juicy it will take more of them, but ordinarily nine is enough to make a two-gallon freezer of ice, and it will be found fully as good as those made by more expensive rules.

CARAVEN.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Eggs For Sale

Mammoth Bronze Turkey eggs, 15 for \$4. Barred Plymouth Rock chicken eggs, 15 for \$1.50. If you wish to secure stock of the best of these strains send in your order early. I am unable to supply the demand each year. FIEDMONT POULTRY PLACE, Miss E. CALLIE GILES, Propr., Whittier's Depot, Va.

Eggs for Hatching.

BUFF ORPINGTONS.

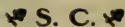
\$1.25 for 15.

Will spare a few COCKERELS.

GASTON FARM, Somerset, Va.

S. C. White Leghorns EXCLUSIVELY.

We have the great laying strain of White Leghorns. We keep the best blood and never inbred; they are fine in size, and pure white. We are booking orders for eggs, 15 for \$1; 30 for \$1.75; 100 for \$5. A few cockerels for sale, \$1 each. Address HIGHLAND VIEW FARM, Mitchell's, Va.



White Leghorns

exclusively. Eggs for sale from this GRAND STRAIN OF WINTER LAYERS at \$1.50 per sitting of 15. COCKERELS, \$1.50; PULLETS, \$1.25. JOHN A. ELLETT, Emmetts, Va.

EGGS FOR HATCHING.

Echo Farm Poultry. Single Comb Brown Leghorns exclusively. Best laying strain. White Holland Turkeys, from prize winners. Eggs, Leghorns, \$1 for 15; \$6 per 100. Eggs so far 90 per cent. fertile. Turkey eggs, \$2.50 for 10. \$10 for 50. Prompt shipment. The Golden Rule is my motto. CAL. HUSSELMAN, Richmond, Va., R. 6.

S. C. W. Leghorn

(Blittmore prize winning strain) and BARRED PLYMOUTH ROCK EGGS for sale. 75c. for 15 or 3 sitting for \$2. Satisfaction guaranteed. Mrs. F. E. WILLIAMS, Charlottesville, Va.

FANCY PEACOCKS FOR SALE

We have several trios of fine birds which we can offer at reasonable prices. Cocks have fine plumage.

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DEPT. A. TATE SPRING, TENN

BERKSHIRE PIGS,

eligible to registry,

MAM. BRONZE TURKEYS, S. C. BLACK MINORCAS,

all pure bred. Eggs, per sitting: Turkey, \$5; Pekin Duck, \$1.50; Black Minorca, \$1.50. TUCKAHOE FARM, Box 368, Richmond, Va.



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when the hens lay. Keep them laying. For hatching and brooding use the best reasonable priced Incubators and Brooders - built upon honor, sold upon guarantee.

THE ORMAS

BANTA MFG. CO., Logansport, Indiana.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

EWELL FARM STALLIONS.

It pays to breed the best and the best only pay. The other kind merely waste money. So in selecting a stallion to breed to, the breeder who wants to make money out of his operations, will select the best stallions obtainable. Ewell farm has three horses which it believes are unsurpassed. John R. Gentry is in the first place a model of perfect conformation and beauty in a horse. In the next place, he was the first horse to beat 2:01 in harness, and has held ten World's records, and lastly, no sires beauty to a remarkable degree. A number of his get are being used every day by some of the wealthiest families in New York, for family horses, because they have perfect conformation and perfect manners, and perfect trotting action. A horse with these qualifications is not sold on a market basis, but will bring what you ask for him. John R. Gentry was born a trotter, but was developed and raced as a pacer. He brought in 1897 a higher price by \$5,000 than any other pacer ever sold for at auction, and the \$19,900.00 for which he sold, is nearly twice as large a sum as any of the so-called "champions" have since sold for under the hammer. By breeding to John R. Gentry you have the chance to produce a horse as famous, as valuable as he was, and you are almost certain to produce one of extraordinary value, aside from its speed. So why not breed right if you breed at all and send your mare to the greatest horse in the world?

McEwen 2:18 1-4 is now twenty years old and in his nineteen year old form, was shown six times, four of which were in harness. He was unbeaten in harness, and stood second only once. He is a sire of race horses, show horses and road horses of the highest type. He is sixteen hands high and weighs over 1,200 pounds, and his bold, trappy, frictionless trotting action is rarely met with. Hal Brown, 796, has been selected to succeed his sire, Brown Hal, 2:12 1-2, at Ewell Farm and this fact in itself is sufficient recommendation for him. Brown Hal 2:12 1-2 sired, Star Pointer 1:59 1-4 and sixty-three others with records, about thirty of which average 2:12. He has probably done more than all other horses combined, to make Ewell Farm and its horses famous. Hal Brown is full brother to four, with records from 2:07 1-4 to 2:13 1-4, and himself had greater colt speed than any other Hal, having paced an eighth as a yearling in fifteen seconds.

Patchen Wilkes, the handsomest son of George Wilkes, and sire of Joe Patchen 2:01 1-4 and gr. sire of Dan Patch 1:56, is standing at Ewell Farms, Nashville stable. His stable companion is the last young horse Axtellon 2:15 1-4, a son of Axtell 2:12, that once sold for \$105,000, and a brother to Axworthy, whose get gained such enviable records as trot-

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PLANS FREE for building the famous Economy. All fixtures furnished; also incubators at almost one-half price. Catalogue free. ECONOMY CO., Harrisonburg, Va.



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tells why our machine is preferred by users, and all about artificial incubation. There's pointers that may mean dollars to you. We pay freight, and guarantee goods as described in the book. The book is free. Write for it today. Postal will do.

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MALTESE JACK, five years, sound, kind and sure. One pure Red Poll bull calf. W. E. MOTT, Dixondale, Va.



JACKS, JENNETS, STALLIONS.

Fine Jacks a specialty.

Write for what you want.
W. E. KNIGHT & CO., R. F. D. 5,
Nashville, Tenn. Phone 3095L

FOR SALE or EXCHANGE

4 YOUNG JACKS, fit for service; one Jennet with jack colt by her side. One Jennet 4 years old. I offer the above Jacks and Jennets low for cash, or I will exchange for good horses or mules. For further information apply to ED. THOMPSON, Chiffade, N. C.

KNIGHT & JETTON,
Breeder of and dealers in

JACKS, JENNETS, STALLIONS.

Durham and Hereford
Yearlings.

FINE JACKS a specialty.

Send Stamp for catalog.

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Spanish Jack.

14½ hands high, weight 800 pounds, 10 years old, for sale. Sure breeder, good teaser, good driver and gentle. Come and see him. Will take a 1200 pound mare in part payment.

R. M. JANNEY, Gloucester, Va.

Jacks, Jennets and Mules.

A fine lot of Kentucky bred and big black Spanish jacks and jennets. Also mules, match teams, one to six years old. Write or see me before you buy. Come to Kentucky if you want a good jack.

KENTUCKY JACK
FARM, JOE E. WRIGHT, Junction City, Ky.

Mammoth Jacks.

50 registered MAMMOTH JACKS; some nice JENNETS and SADDLE STALLIONS. Write for catalogue and come to see us before you buy. J. F. COOK & CO., Union Stock Yards, Lexington, Ky.

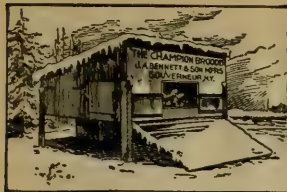
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WILL BUY YOUR CHILD

A NICE PONY.

WRITE TO

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60,000 poultrymen, women and farmers are making money raising chicks with our machines for the early market. Early chicks bring the big prices. Our big book tells how to breed, feed, hatch and grow chicks for profit. It illustrates great poultry farms where Champion Incubators and Brooders are used. Big money from small investment. We are the largest brooder manufacturers in the world. 100 chick brooder only \$6.50, 120 egg incubator, \$16.50. Book is free.

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GOVERNEUR, N. Y.



ters in the fall of 1904. Axtellion is sixteen and a half hands high, weighs 1,300 pounds, and is a horse of great intelligence, and smooth, frictionless trotting action. Thus it is seen that Ewell Farm is represented with stallions of the best known racing strains, and by individuals that are unsurpassed by any collection of stallions in the country. Write for particulars to Mr. Geo. Campbell Brown, Spring Hill, Maury Co., Tenn.

PERCHERON SALE.

Editor Southern Planter:

Dear Sir,—Your journal, The Southern Planter, was the direct cause of my selling the highest priced and still the cheapest stallion I ever sold, and as long as I have live stock for sale, I will remain an advertiser. I have not advertised in any agricultural paper or live stock journal for over twelve months, excepting The Southern Planter.

Yours truly,

JOHN F. LEWIS.

Lynnwood, Va., February 16, 1905.

HALLOCK'S "O. K." ELEVATOR POTATO DIGGER.

On another page will be found an advertisement of D. Y. Hallock & Sons new potato digger. Inasmuch as this firm has been making diggers for about twenty years, it would seem that they have a machine of special merit. Every potato grower knows how difficult it is to get a machine to dig potatoes and to dig them right. Hallock & Sons have solved this problem; at least they think so, and are willing to back their judgment with their machine upon the most liberal terms. By all means look up this advertisement. Write them for further information in regard to this digger.

QUAKER CITY FEED MILL.

In a previous issue we called attention to this well known grinder made by A. W. Straub Co., Philadelphia. This company informs us that they are somewhat disappointed at the number of our readers who have taken the trouble to investigate the merits of this mill. Inasmuch as this is one of the oldest grinders on the market, made in all sizes and powers with every modern appliance, we feel that it is only necessary to call attention to this company's advertisement in order to interest hundreds of our readers.

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Clay Center's Claim to Fame Rests on the
"SURE HATCH"
Incubators and Brooders

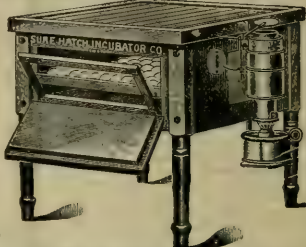
60,000 IN USE AND SALES
INCREASING ENORMOUSLY

When you send to Clay Center, Neb. for an incubator or brooder, be sure and specify the "Sure Hatch" and get the best.

The "Sure Hatch" is the incubator that gave to Clay Center its claim to fame. It has passed through the stage of experimentation and is today a pronounced success. Why pay your good hard money for an untried incubator and waste time with an imperfect experiment, when you can get a "Sure Hatch" for the same price, that will not disappoint you? The "Sure Hatch" experience is paid for. You don't have to help pay for experimenting with uncertainties when you get a "Sure Hatch." It hatches more chicks to the 100 eggs that will live and grow than any other incubator made.

Sixty thousand machines in successful operation in all parts of the world attest their superiority and make it certain that you take no chances when you invest in a "Sure Hatch." We take chances on the success of every "Sure Hatch" that goes out. How? By giving the purchaser a 60 days' free trial, during which he can take out two batches to thoroughly test the machine.

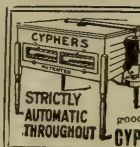
Sure Hatch Incubator Co., Box 95 Clay Center, Neb. Box 1085, Indianapolis, Ind.



And just remember that the "Sure Hatch" Guarantee protects you for five years. It is worth something to know and to feel that money cannot buy more in the incubator line than what we furnish for the price in the "Sure Hatch." All we ask for our 120-Egg Machine, with freight charges prepaid to your station is \$10.00. We can ship promptly.

Among the strong points of the "Sure Hatch" are: 1. Heater—live, hot air all around it; cold air can't get to it; saves oil and trouble; other incubators have coolers and waste oil. Built of California redwood, that will not warp, crack, shrink or swell; patented copper heating system and tested patent regulator; full asbestos lined.

A good incubator is a money-maker from the word "go." Place your order for one now. There is but one "Sure Hatch." It is made at Clay Center, Neb. Our eastern office is at Indianapolis. Free Catalogue and Poultry Book now ready. Send at once. Address The nearest office.



Standard Cyphers Incubators

are guaranteed to hatch more and healthier chicks with less oil and less attention in your hands than any other; are absolutely automatic and self-regulating. Used and endorsed by 43 Government Experiment Stations and by America's foremost poultrymen. Complete Catalogue and Poultry Guide, 25 pages (211) more than 500 illustrations. FREE, if you send addresses of two neighbors who keep good poultry and mention this paper. Address nearest office.

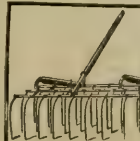
CYPHERS INCUBATOR CO., Buffalo, Boston, Chicago, New York, Kansas City or San Francisco.



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sell direct to purchasers at lowest prices. NO AGENTS. Latest double-vent 250-Egg Nursery Incubator and Brooder, Everything complete, with Directions and Plans for \$24.00 cash. Satisfaction guaranteed. Order. Delaware City National Bank Set of Poultry House and Brooder Plans, 10c. Large 150-page Poultry-book, 50c. Prompt shipment of anything ordered.

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The YORK IMPROVED WEEDER has square spring steel teeth, with round points, narrow in the body and of great flexibility—the most important essential of a weeder. Do not slash nor bruise the young plants as flat teeth do. Never clog give greater clearance. The teeth being square, never break. The frame is made of strong, flexible, angle steel—handles and shafts are adjustable. Send for free circular. The Spangler Corn Planters and Grain Drill is the best.

THE SPANGLER MFG. CO., 608 Queen St., York, Pa.

\$360 NET PROFIT

IN FEEDING ONE TON TO YOUR CATTLE OR HOGS.

One Hundred Pounds will make you \$100 net profit. International Stock Food—the World Famous Line—4 FEEDS IN ONE LINT—is known everywhere. It is prepared from high class powdered Roots, Herbs, Seeds and Barks and enriches the blood, tones up and permanently strengthens the entire system. Cures and Prevents Disease and is remarkable aid to Digestion and Assimilation so that each animal will gain more pounds from all grain eaten. We positively guarantee that one ton of "International Stock Food" will make you \$360 net profit, over its cost, in extra growth and Quick Fattening of Cattle or Hogs in Winter, Spring, Summer or Fall and at the same time keep your stock Healthy and Extra Vigorous.

Guaranteed to Fatten Your Stock in 30 Days less time and to save grain. If ever fails the use will not cost you a cent. "International Stock Food" is splendid for all kinds of Breeding Stock and is universally acknowledged as the leading high class medicated stock food of the world. It is equally good for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs and Pigs. Endorsed by over Two Million Farmers and One Hundred Thousand Dealers who always sell it as "Spot Cash Guarantee" to Refund Your Money if it ever fails for any recommended use. Guaranteed to Save 3 Quarts of Oats Every Day for Each Work, Carriage or Driving Horse. The \$100.00 Champion, Dan Patch or 15¢ a can "International Stock Food" Every Day.

DAN PATCH mailed FREE

—If you Name This Paper and State the Number of Stock You Own we will mail you FREE a Beautiful Colored Lithograph of our World Famous Champion Shalton Dan Patch 15¢. His picture in 6 Brilliant Colors and a 21 by 28 inches. See our Large Advertisements or Write Direct to Our Office. We employ an office force of 26, with 125 typewriters and all correspondence is answered promptly.

Also Write Us for any Desired Information. **INTERNATIONAL STOCK FOOD CO.,** Minneapolis, Minn.

Large Black

Pigs from Imported sows not akin, imported in dams. This old English breed closely resembles the old Poland China, and is particularly noted for being VERY PROLIFIC, GROWTHY and having an abundance of lean meat. Write me for full particulars.

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SALT POND HERD Duroc Jerseys

PAUL J. 21625, heads the herd, with such sows as JULIE'S BET, 4934, DELLA on SALT POND, 7074, and LADY OF YIN GINIA, 70456. Young stock for sale. S. A. WHITTAKER, Hopeville, Va.

PURE-BRED

Duroc Jersey

Pigs for sale. Prices reasonable. A very choice lot.

JNO. P. LEACH, Jr., Littleton, N. C.

\$25 will buy my \$100

Mammoth Tamworth Boar

FARROWED APRIL, 1901.

HENRY WERRES, Petersburg, Va.

GOOD FARM TOOLS.

The value of tools calculated to save time, labor and energy on the farm can hardly be overestimated. Just as the self-binder has superseded the hand sickle as a harvesting machine, Planet, Jr. tools take the place of the hand-hoe and hand methods of planting and cultivating. With these admirable tools time is saved, better work done, more of it, and the fact that work can be hurried at critical moments beyond the use of the ordinary implements, their value on the farm or in the garden will be all the more appreciated by the progressive agriculturists.



The No. 4 Planet Jr. Combined Drill and Hoe, as shown in the illustration is capable of a large variety of uses, as it will make the furrow, drop the seed, mark rows, roll down, and is extremely valuable as a land cultivator for all times of the year on any crop. Every reader should secure the Planet Jr. illustrated catalog for 1905. It may be had by sending a postal card to S. L. Allen & Co., Box 1107, Philadelphia, Pa.

Coiled Spring Fence.

Because of the scarcity of timber, wire has become the accepted material from which to construct farm fence. That there are a multitude of styles of woven wire fence goes without saying. It is also apparent that much of it is made to sell rather than render service. By the way, it is no little matter to build a fence combining perfect service with long life. It must have strength, compactness, durability, provision for contraction and expansion, and a multitude of little attentions to make it of value and service. The fence that becomes loose and baggy under variation of temperature necessarily gives the owner needless trouble to keep it at proper tension. The only solution for this trouble is the coiled wire, made from high carbon coiled spring steel, and which accommodates itself to any degree of temperature. This style of fence was originated by the Coiled Spring Fence Co., of Winchester, Indiana, and is the most important achievement in fence construction that has been wrought in years. When erected at proper tension it remains upright and rigid, and without tugging and pulling on posts at every change in temperature. It is worth while for fence buyers to give this feature of fence construction careful consideration, and they can do so by securing their catalogue which they mail to any address upon request. They sell it direct to the farmer at wholesale prices and prepay the freight, therefore, our readers have the opportunity to buy as the business man buys.

ANGORA GOATS...

I hereby offer what I believe to be the last of this season's handling. All previous lots sold.

I have six nice does, 3 pure bred, 3 grades, and 1 good young pure bred buck.

I will take \$50 for the 7, or \$35 for the buck and 3 pure bred does, or I will take \$25 for the buck and the 3 grade does, or \$30 for the 3 pure bred does, and \$20 for the 3 grade does, without the buck.

The above prices include crating and delivered f. o. b. here.

SPECIAL:

3 sheep raisers and breeders will do well to watch my announcement in April issue of the Southern Planter. It will interest every sheep raiser, or every dealer in live stock.

The Goat business is only a side line with me, but at that it keeps my competitors guessing. First orders for the above lots get the choice. Address

ROBERT C. BRAUER,
Live Stock Commission Salesman,
PENS: UNION STOCK YARDS,
Richmond, - - - Va.

Address Box 204. Phones 82 and 2126.

Angora Goats...

"The Wealth of the Wilderness." A 32 page pamphlet, by Geo. Edward Allen. Price, 5c. It's worth it.

THE SOUTHERN PLANTER, Richmond, Va.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Chilly, Ky.

Scotch Collies

Edgewood Stock Farm.

When you buy a Collie, why not get the right blood? What is the matter with Christopher, Ormskirik's Emerald, Ormskirik Amusement, Sefton Hero?

We have a litter of babies of this blood. They have full white marks.

Both parents trained drivers. The kind that love stock driving more than eating their dinners. Order quick if you want one. H. B. ARBUCKLE, Maxwellton, W. Va.

Scotch Collies

Champion blood of England and America. Puppies now ready to ship. Also bitches in whelp for sale. MEYER & JEHNE, Farmville, Va.

•—COLLIE PUPS—•

By Imported Sires. Sable and white and tri-color. Price \$5.00. Older ones correspondingly low. Book on Training, 50 cents. Pass it on you buy a Collie.

MAPLEMONT STOCK FARM, Rutland, Vermont.

RED POLLS.

We offer the following bulls:

FLOTILLA 6225. Superb Sire, 6 years old, docile, bred by V. T. Hills of Ohio. Price, \$50.00.

WHISTLER 13478. Calved October 30, 1904.

FLORIZEL 13479. Calved November 5, 1904.

CADET 13480. Calved November 15, 1904.

The last three are nice calves, all by Flotilla out of good cows, \$3.00 apiece at the price. And a certificate of registration goes with each.

PIERSON BROS.,

Summit, Spotsylvania Co., Va.

:: SOME VERY FINE ::

RED POLLED

Calves, entitled to registry, for sale; also a few very good

Poland China Pigs

whose breeding cannot be excelled. Only one SHETLAND PONY for sale now. ARROWHEAD STOCK FARM, SAM'L B. WOODS, Propr., Charlottesville, Va.

Red Polled Bull

FOR SALE.

Ayers 13668: sire, Cherokee, 2233, dam Lulu N. 2, 12572. AYERS is 6 years old in August, 1905; weight about 1,800 pounds. Vigorous, well broken, an excellent sire. Price, \$100. CARROLL BROS., Lynchburg, Va.

DEVON HERD. HAMPSHIRE DOWN FLOCK, ESTABLISHED 1884.

DEVON CATTLE

BULLS and HEIFERS.

Hampshire Down Sheep,
RAMS and EWES.

ROBERT J. FARRER, Orange, Va.

Registered Devons

FOR SALE.

1 large, five-year-old bull; also bull and heifer calves; also 2 second-hand incubators. W. E. THOMAS, Nassawadox, Va.

DORSET SHEEP.

Very choice young rams at reasonable prices.

ALFALFA SEED, strictly fancy, Western grown. Selected from the best that has come on market this season.

BEARDLESS BARLEY, the best known nurse for alfalfa seed. Guaranteed pure. J. E. WING & BROS., Mechanicsburg, O.

ADDRESS TO THE DARK TOBACCO GROWERS.

We, the undersigned, members of Union No. 1 of the Society of Equity, and also members of the Dark Tobacco Growers Association of the county of Charlotte, were appointed at a recent meeting to draw up a plan of procedure in the marketing of our tobacco, looking to better prices, beg leave to recommend the following:

1st. We have ascertained that the present crop of tobacco throughout the dark belt will not supply the demand.

2d. We conclude that no man will dispute the fact that the prices heretofore obtained for our staple is below the cost of production; therefore be it

Resolved, That we urge the members of the Society of Equity and of the Dark Tobacco Growers Association of Charlotte county, and in fact, all tobacco growers, to withhold from the market for the present all of their tobacco, with the exception of the lower grades, and that each and every one use their best endeavors to accomplish this end.

3d. We furthermore recommend that a copy of these resolutions be sent to the presidents and secretaries of all of the counties in the dark tobacco section of Virginia, urging them to take a similar stand.

4th. That a copy be sent to the president and secretary of the Dark Tobacco Growers Association of Virginia, urging him to call, as soon as possible, a meeting of the State body looking to that body taking similar action.

5th. That a copy be sent to every local newspaper in the dark belt of the State asking for publication.

6th. That a copy be sent to the national organ, the "Up-to-date Farmer," and in this way reach the tobacco growers of Kentucky and Tennessee.

7th. We furthermore desire to say to all growers of tobacco who cannot conveniently hold their tobacco for any length of time, that we have ascertained that when your tobacco has been put in proper shape and insured, that there will be no difficulty in getting any pecuniary assistance that may be desired in the bounds of reason.

S. C. DANIEL.

Chairman.

W. D. RICE.

D. A. MALONEY.

C. E. BRIGHTWELL.

J. A. FOSTER.

G. H. DEFORD.

G. W. BERKLEY.

J. H. PRICE.

J. D. SHEPPERSON.

W. T. MARSHALL.

H. N. ANDREWS.

W. T. MARTIN.

J. E. ROBERTSON.

Committee.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

REGISTERED CATTLE.

Short Horns. Polled Durhams. Red Polls.

Who wants a few good Bulls, Heifers or Cows? Observe herd, bred and reared in the mountains of Western Texas, below the feverline. Healthy, hardy stock. Write us your wants. Or will sell entire Herd of three hundred head, and rent fine ranch reasonably. Splendid Opportunity.

LANDA CATTLE COMPANY,
New Braunfels, Texas.
Breeders of Registered Cattle Only.

Elkton Stock Farm,

LOCATED ON NORFOLK & WESTERN R. R.

12 Miles W. of Lynchburg.

Breeders of Pure Bred, Registered

HEREFORD CATTLE

AND

BERKSHIRE HOGS.

Young stock for sale at all times, at reasonable prices.

All statements and representations guaranteed.

LONG DISTANCE TELEPHONE,

FOREST DEPOT, VIRGINIA.

PLEASANT VALLEY STOCK FARM

Shorthorn

calves from fine milking stock.

Yorkshire Pigs

of prolific breed.

JAMES M. HOGG, Hamilton, Va.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS AND HEIFERS.



None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

MEADOW BROOK

SHORT HORNS

For sale at Farmers' prices 1 2-year-old Red Bull, 1 yearling Red Bull, 1 yearling Roan Bull. C. A. SAUNDERS, Meadow Brook Stock Farm, Culpeper, Va.

REGISTERED

Short-Horn Cattle

AND POLAND CHINA PIGS

FOR SALE at low prices.

Call and see my stock or

write me. A. J. S. DIEHL,

Port Republic, Va.



Rose Dale Herd Aberdeen Angus.

Top notch young registered Bulls our specialty. A few heifers to offer with bull not skin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS, Jefferson, Va.

MONTEBELLO HERD ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va.

THOROUGH-BRED....

Berkshire Boars, Dorset Buck Lambs, Jersey Bull Calves.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

BERKSHIRE BOARS. I offer some exceedingly choice young boars for sale; by Imported Dancesfield Tailor, 76940 and out of Biltmore bred sows. It will be hard to find better or cheaper stock.

HENRY WARDEN, Fredericksburg, Va.

PURE-BRED

Berkshire Pigs,

Two months old, \$4 each; \$7 per pair; out of pure bred sows and by registered boars. H. SWINEFORD, 1110 E. Main St., Richmond, Va.

GLENBURN FARM... BERKSHIRES

We have two imported boars and eight imported sows, the cream of the greatest English herds; also animals combining the choicest English blood with that of American champions. Pigs from imported and from English-American animals for sale. DR. J. D. KIRK, Roanoke, Va.

MAPLE GROVE

BERKSHIRES.

Am offering pure bred pigs at reasonable prices. Either sex. Pedigree furnished with each pig.

J. W. McFADDIN,

R. F. D. No. 1, Raphine, Va.



and Poultry. Write for prices and free circular. P. F. HAMILTON, Cochranville, Chester Co., Pa.

WITH APOLOGIES TO BULLFINCH. A professor in a Western college while giving an examination in mythology in country school called up a bright-looking girl and asked the following question: "Who was Ganyমেদ?"

Promptly came the answer, "Ganyমেদ was the son of Olympus and an eagle."

The class teacher blushed for her pupil and exclaimed, "Why, Elizabeth! where did you learn that?"

"Indeed, it says so in the book," replied the girl.

The professor then asked the girl to find the place and read the paragraph aloud, whereupon the class was both astonished and delighted to learn that Ganyমেদ was borne to Olympus by an eagle.—Lippincott's.

THE INCUBATOR AN EDUCATOR.

The Prairie State Incubator is easy to run. A few minutes' attention every morning and night is all it needs. It is easy to learn from the book of directions how to test the eggs, how to turn and air them, how to get big hatches from fertile eggs, how to avoid the mistakes made by others, and to profit by their successes.

The Prairie State Catalogue is a library of information on every point for the education of beginners or experts in poultry raising. Any one can get one free from the Prairie State Incubator Company, Homer City, Pa.

A NECESSARY ARTICLE IN THE STABLE.

Harrowsmith, Ont., Nov. 16, 1904.
Dr. B. J. Kendall Co.,
Enosburg Falls, Vt.

Gentlemen:—I have used your Kendall's Spavin Cure and found it a very necessary article in the stable. Please send me a copy of your Treatise on the Horse and His Diseases, as I have a horse with Splint, which I wish to treat. Yours very truly,

H. A. COOK.



John E. Heatwole, proprietor of the Valley Poultry Farm, Harrisonburg, Va., has an illustrated book on poultry, describing over forty-five varieties and giving valuable information on diseases, feeding and care, etc., that he will send to Southern Planter readers for 6 cents in stamps. Please mention Southern Planter when writing.

One of the first Cahoon Broadcast Seed Sowers made was sold to Mr. J. P. Shattuck, of Portland, Maine, who has used it every season for more than forty years. Many other farmers have used these machines from twenty-five to thirty-five years, each. It pays the farmer well to get an accurate machine that will last a lifetime. This sower is made by the Goodell Company, Antrim, N. H. Write for catalogue.

BERKSHIRES

Three registered sows, daughters of Elmwood Chief of Biltmore, and Commander's Beauty, both purchased from Biltmore Farms, due to farrow this month. Sire of pigs, Mason of Biltmore, II (68548). Buyers of Berkshire pigs, write to ROBERT HIBBERT, Charlottesville, Va.



OUR herd represents the very best strains imported

—LARGE—

English Berkshires.

Choice stock at reasonable prices. Address

Cottage Grove Farm,

P. O. Box 17, Greensboro, N. C.

Berkshires

A fine lot of pigs from my great sows, BILTMORE QUEEN and HIGHCLERE LADY, by PULASKI CHIEF, ready to wean. Price, \$5 each if taken at weaning time.

B. E. WATSON, Pulaski, Va.

HAWKSLEY STOCK FARM

Still has a few 5 mos. old

BERKSHIRES

Now booking orders for April and May shipment of Stock that is as good as the best. B. P. ROCK and S. C. B. LEIGHORN eggs for sale, \$1 for 15. J. T. OLIVER, Propr., Allens Level, Va.

BERKSHIRE PIGS.

High bred Berkshire pigs at Farmer's prices.

EGGS.

S. C. Brown Leghorn eggs from choice birds, 75c. per 15. EVERGREEN FARMS, W. B. GATES, Propr., Rice Depot, Va.

HEREFORDS,

(ENTIRE HERD)

DORSETS,

(ENTIRE FLOCK)

A prompt buyer will get a bargain.

H. ARMSTRONG, Lantz Mills, Va.

ORCHARD HILL PURE-BRED

POLAND-CHINAS.

1 beautiful sow 9 months old; some also pigs later. A fine GUERNSEY BULL CALF, whose grand dam tested 348 pounds butter in 1 year. Also S. C. B. Leghorn and W. Wyandotte eggs at \$1 per 15. F. M. SMITH, JR., R. F. D., 4, Charlottesville, Va.

Chester White Hogs,

Best hog on earth at farmer's prices.

S. M. WISECARVER, Rustburg, Va.

ELLERSLIE FARM

Thoroughbred Horses
AND SHORTHORN CATTLE,
Pure Southdown Sheep
and Berkshire Pigs.

For Sale. R. J. HANCOCK & SON,
CHARLOTTESVILLE, Va.

HEREFORD CATTLE

"Brains and Blood make Breed and Beef"

The Great Beef Breed of America.

My Sale List Includes

AGED BULLS, YEARLING BULLS, BULL CALVES, and COWS WITH CALF at Foot.

PRICES LOW. QUALITY HIGH.

All Stock Registered.

MURRAY BOOCOCK,

KESWICK, = = = = = VIRGINIA.

[Keswick is on the C. & O. Ry. East of Charlottesville, Va.]

The Imperial Fruit and Poultry Farm.

We still have a limited number of the following varieties at prices within reach of all

S. C. Brown and White Leghorns, Barred and White Plymouth Rocks, and a few Silver-Laced and White Wyandotte Cockerels.

...Write For Prices on Eggs For Hatching...

SATISFACTION GUARANTEED.

R. R. HEYDENREICH, Mgr., Staunton, Va.

Percheron and French Coach

STALLIONS and MARES for Sale.



W. J. JORDAN & SONS, Dublin or Newbern, Virginia.

A CLOSE CORPORATION.

In a certain Highland parish the church collection, after being counted, was placed in a box which was consigned to the care of the minister, says the author of "Bygone Church Life in Scotland." The minister hid it, with the key in a place known only to himself and the beadle.

In spite of this small sum of money were regularly extracted from the hoard, and one Sunday, when the minister discovered that some more had disappeared, he summoned the beadle.

"David," said he, "some one has been taking the church money from the box, and you know there is no one has access to it but you and myself."

Thinking he had the beadle thoroughly cornered, the minister fixed him with his eye, and paused for an answer. But David dumbfounded him by his cool proposal:

"Weel, minister, then if there's a feshenshency, it's for you an' me to make it up among us an' say naething about it."

HAS A STEPMOTHER.

A strapping lad of twelve was registered in one of the public schools of Philadelphia. He readily gave the several facts called for, but he did not know whether his birthday fell on the tenth of November or of December.

The principal was surprised at this display of ignorance on the part of so old a child, and he asked how it came to pass that he hadn't learned the date of his birth. "A wasn't born," said the boy, "I had a stepmother."—Lippincott's.

"PACKAY" FOR SALE.

Reg. Percheron Stallion.

Brilliant strain, 3 year old May hex; solid black, star in forehead, good, heavy, flat bone, compactly built, good style and action.

POLAND CHINA gits due to farrow in March and April. Plymouth Rock eggs, 15 for \$1; 30 for \$1.50. THOS. R. SMITH, Lincoln, Loudoun Co., Va.

It Pays to Breed the Best.

BREED FOR SIZE, BEAUTY AND SPEED.

EWELL FARM OFFERS THE SERVICES OF

JOHN R. GENTRY 2.00%.

The most beautiful track horse in the world. A successful sire of speed and beauty.

MC EWEN 2.18%.

A winner at the St. Louis World's Fair in 1904. Sire of twenty-three with race records.

HAL BROWN 0796.

Son of Brown Hal, 2.12%, and brother of four with records from 2.07% to 2.13%.

Mares from a distance kept upon reasonable terms, and given first-class attention. Young stock, Colts and Fillies, always on hand and for sale. Address

GEO. CAMPBELL BROWN,
Spring Hill, Maury County, Tennessee.

N. B.—Patchen Wilkes, 2 29%, gr. sire of Dan Patch, 1.56, and Axtellion, 2.15%, brother to the great Axworthy, are kept at our Nashville stables.

**Takes the
Place of
the Plow
in Many
Soils**



**And it Does
the Work
Better
Quicker
Easier**

JOHNSTON CONTINENTAL ALL STEEL DISK HARROW

is a truly economical implement. It turns, breaks up and thoroughly pulverizes the soil, letting in the warm sunshine, thus sweetening and freshening sour, stale land. Cuts and covers up weeds, stubble and trash; cuts but does not pull up sod. Works with least possible friction and tills entire width of cut. Lightest draft disk harrow made. Send for a copy of our Disk Harrow booklet and learn why its Roller Bearings, Improved Center Bumpers, Pressed Steel Weight Boxes, Special Steel Disks, Steel Scrapers and Direct Draft for three horses make it the most desirable tilling machine to buy. Strong and durable; will outwear any other makes. Made in widths from 4 to 25 ft., cut, 16, 18 or 24 in. solid disks, 16 or 18 in. cut-out disks, one lever or two, with or without Center-Cut attachment or Disk Drill and Seeder attachment. Grand Prize—highest St. Louis Award.

Johnston Harvester Company, Box C-11, Batavia, New York, U. S. A.

LYNNWOOD STOCK FARM

PERCHERONS,

SHORTHORNS,

BERKSHIRES.



My Percherons are from the best bred stallions and mares obtainable. I have used Imported sires costing \$1,800, \$2,000 and \$2,250, and American bred stallions at \$1,650. I recognized the fact that in building up a stud, the foundation had to be the best. Purchasers will therefore find only the best blood here.

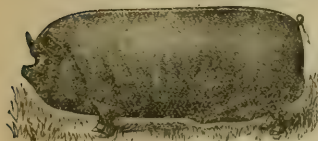
Every horse I sell will also possess individual merit. Come and inspect my offering.

SHORTHORN CATTLE.

My Shorthorns trace only to strictly first class and prize winning stock. I keep two Herd Bulls, a red and a roan. I can furnish young herds of the best quality and breeding. Calves of either sex for sale at much lower prices than this class of stock can be gotten elsewhere. Remember, I used a grandson of Cup Bearer prior to the purchase of LORD LAVENDER and SIR JOHN BULL. Let me describe and quote you a Select Bull that will make money for you.



BERKSHIRE HOGS.



BACHELOR COMBINATION and GENTRY'S MODEL head my herd. I used five Biltmore Boars before I purchased them. If this isn't a guarantee of first class stock, I don't know what is. My sows are equally as good; never paid less than \$25.00 even for the youngest. Choice stock, all ages, for sale at prices which reputable breeders cannot get under.

To those who do not know me, I wish to say that I am not simply bragging on my stock; I really have what I claim. Come and inspect it for yourself, and if you find it contrary to representations, I will refund you railroad fare. I will cheerfully furnish names of parties to whom I have sold stock. I am somewhat of a "veteran" stock breeder and am still sticking to my original motto, "satisfaction for every customer."

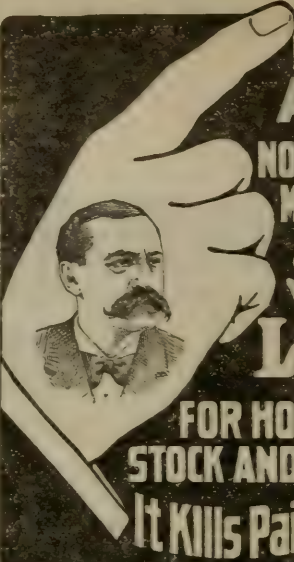
JNO. F. LEWIS, Proprietor, Lynnwood, Virginia.

[Passenger trains stop at Lewis Station. N. & W., on farm.]

MAKING A CEMENT TANK.

A properly constructed concrete tank will stand the climate of Iowa or Greenland. Such tanks often freeze solid with us here in Ohio and do not break. They can do no worse in Iowa. To make this tank excavate to firm earth, which may mean a foot or more, the whole size of tank and surrounding platform, or 14 feet in diameter. Next lay down the concrete over this area. The bottom 6 inches or 8 inches need not be so rich as the top surface. I cannot prescribe how rich any of it should be but here are certain rules: the theoretical amount of cement needed by any particular sand or gravel may be determined by filling a vessel with the material and another vessel of exactly the same capacity with water. You should choose something with straight sides, tin tomato cans will serve, taking off the tops unless the material is coarse. Loosely shake it down in the one and add to it water from the other until it will absorb no more. For instance, your cans may be 6 inches high. The one with water in it was level full; after pouring from it to fully saturate the sand in the other it has now one inch of emptiness at the top. Then the relation of pore space to solids in the sand is as one to six, and theoretically you should use one measure of cement to six of sand. Practically you should use more, for unless the sand is very dry and you are very patient you cannot thoroughly mix it together; that is, there will be two or three particles of cement where there should be but one and a corresponding deficiency in some other place. I hope this rule will be remembered by Gazette readers, as it will save us answering the same question over and over.

With ordinary gravel, such as we find here, a barrel of cement to a yard of gravel makes a very hard concrete. Supposing you find it to be right for you, you will then mix dry four yards of gravel and four barrels of cement for the foundation, mixing it very thoroughly before putting water on it, and the best way to do this is to shovel it from one pile to another and back, taking each shovelful from the bottom and putting it squarely on top of the second pile, doing this four times at least, then adding water with a sprinkler, and slowly, so that it will not run down and wash the cement into pockets of undue richness. Do not make it wet or sloppy but merely moist enough to adhere; put it in place and ram it hard with an iron rammer. At once put on another yard of gravel in which has been put two barrels of cement for the top coat. This may be made softer and the coarser stone should be taken out of it. Trowel this down smooth on the platform part. The next morning set up the form for the round tank 8 inches in diameter. It may be made of 1x4 stuff set upright and held in place by iron hoops or thin strips of wood, the two wooden walls



**FARMERS!
ATTENTION!**

**NO LINIMENT WAS EVER
MADE THAT EQUALS**

**SLOAN'S
LINIMENT**

**FOR HORSES AND OTHER
STOCK AND ALL FAMILY USES**

It Kills Pain and Kills Germs

10 REGISTERED

JERSEY HEIFER CALVES

3 to 5 months old.

JERSEY AND GUERNSEY BULLS, 6 months old, \$30.

BERKSHIRES, Young Sows bred and Pigs.

Barred Plymouth Rock and Single Comb

Brown Leghorn Fowls and Pekin Ducks.

Eggs at \$1 a sitting, carefully packed.

M. B. ROWE & CO., Fredericksburg, Va.

The Grove Stock Farm

Offers for prompt shipment 6 pure-bred

HOLSTEIN-FRESIAN BULL

Calves from 4 to 6 months old.

ORDERS BOOKED FOR APRIL AND MAY DELIVERY OF

BERKSHIRE PIGS.

PLYMOUTH ROCK COCKERELS--a nice lot.

N. & W and Southern Railways.

T. O. SANDY, Burkeville, Va.

—URY STOCK FARM OF—

HOLSTEIN-FRIESIANS

Have reduced our herd 25 head during the past two months, but would like to sell as many more before going into winter quarters. Herd headed by Dekol 2d, Butter Boy 2d, No. 2, which we can justly claim the best butter-backed bull South of the Mason and Dixon line. Also a choice lot of English Berkshire sows from 3 to 5 mos. Sired by Major Faithful, Fancy Duke and Esau Princess of Pilston. Before buying write or come and see us. THOS. PASSITT & SONS, Symar, Md.

being spaced 12 inches apart at the bottom and if you have skill so to do 6 inches apart at the top, which will save some material. Fill this form with concrete made richer than for the foundation and not quite so rich as for the top stuff; ram it in hard; imbed in it now and then strands of heavy wire reaching clear around it; when it is hard, after about 24 hours, take off the wood and at once coat it with pure cement made thick as cream, putting it on with an old broom. Fill it with water in a day or two and leave it full until it is thoroughly hard. That tank will endure forever. It will take about 12 barrels of cement and 10 yards of gravel.—Joseph E. Wing.

SUCCESSFUL FARMERS AND GARDENERS.

The Bateman Manufacturing Company, of Grenloch, N. J., have for nearly seventy years made a special study of the manufacture of labor-saving, money-making tools. There is no point of excellence that their famous Iron Age farm and garden implements do not cover. The No. 6



Combined Double and Single Wheel Hoe, Hill and Drill Seeder, is a good example of the utility and completeness of the modern implement for gardeners who cultivate for profit. This tool is equipped in a most satisfactory manner for all work on market garden or farm, where hand work is to be employed in seeding and cultivating, or where horse cultivation is to be employed after the plants arrive.

It can be changed into a complete double or single wheel hoe by the most inexperienced in less than five minutes. The high wheels of this implement also make it easy to operate, yet do not give to inequalities of soil, as a low wheel.

The manufacturers issue a free book, "Iron Age," describing in detail this valuable combined outfit, as also a large line of garden tools, horse hoes, cultivators, potato planters, sprayers, etc. The book also gives considerable information of interest to every farmer and gardener. A postal card directed to the Bateman Manufacturing Company, Box 167, Grenloch, N. J., will secure it.

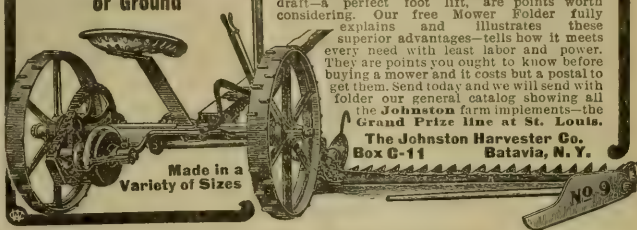
STOCK FOR SALE.

An entire herd of Hereford cattle; also a flock of Dorset sheep are advertised by H. Armstrong, Lantz Mill, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

JOHNSTON MOWER NO. 9

A Chain Drive Mower That Meets Every Condition of Grass or Ground



Cuts any kind of grass, on any kind of ground. There's scarcely a condition that its wide range of adjustments will not meet to perfection. Easy on the horses—easy on the driver. A combination of greatest strength, lightest possible draft, smoothest cutting and wearing qualities that has won a host of farmer-friends. Its roller bearings—long, wood pitman—babbitted pitman box—cutting apparatus that will not clog—evenly divided draft—a perfect foot lift—are points worth considering. Our free Mower Folder fully explains and illustrates these superior advantages—tells how it meets every need with least labor and power. They are points you ought to know before buying a mower and it costs but a postal to get them. Send today and we will send with folder our general catalog showing all the Johnston farm implements—the Grand Prize line at St. Louis. The Johnston Harvester Co. Box C-11 Batavia, N. Y.

SUNNY HOME HERD.

Aberden Angus Cattle

We have furnished the material to found another pure bred herd the past month; also sold a car of those fine HIGH GRADE heifer calves. Who will be the next lucky man? We have a couple of genuine HERD HEADING bulls to place this month. Baron Rose-boy, 57666, may justly feel proud of his offspring, in the herd this year; some of the best calves we ever bred. Write A. L. FRENCH, R. F. D. 2, Byrdsville, Va., Station Fitzgerald, N. C., D. & W. R'y.

OAK HILL FARM

SADDLE and THOROUGHbred HORSES,
ABERDEEN-ANGUS and JERSEY CAT-
TLE, BERKSHIRE, POLAND-CHINA, DUROC
JERSEY and TAMWORTH HOGS. ❖ ❖

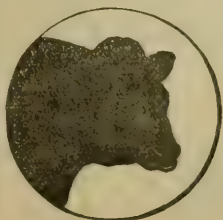
WHITE PLYMOUTH ROCKS, WHITE HOLLAND TURKEYS, PEKIN

DUCKS and PEA FOWLS. Eggs in Season.

SATISFACTION GUARANTEED. WRITE FOR PRICES.

Shipping Point, Oak Hill, (station on farm) D. & W. Railway 15 miles West of Danville, Va.

SAM'L HAIRSTON, Wenonda, Va.



—The Delaware Herd of—

ROYAL ANGUS CATTLE

is not surpassed either in breeding or individual animals, by any herd in the East. At the head of our herd is PRINCE BARBARA, 68604, the son of the great \$3,100 Prince Ito. Females of equally choice breeding. Write your wants. Remember, we take personal care of our cattle; keep no high priced help; incur no expense of exhibiting; all of which enables us to offer stock at equitable prices. Send for pamphlet.

MYER & SON, Prop., - Bridgeville, Del.

MY THREE FRIENDLY BOTTLES.

MRS. GEORGE GRAY.

My kerosene bottle always comes in use on Monday. If I have a much soiled wash I add half a teacup of kerosene to the suds and the dirt almost falls out of the garment. If there are any grass or fruit stains they are wet in kerosene and rolled up for a time before washing and then put in the suds. When the starch is made a little is added and a good gloss obtained. A cloth dampened with it cleans the wringer rolls and sink very easily.

When I clean house I add some to the water in which I wash windows. It makes them glisten and the flies do not like the odor. I also put some in the water I wash woodwork with, while a cloth dampened with it makes furniture look like new. If a hinge squeaks a few drops will stop it. Nothing is better to remove gum from sewing machine, or rust from bolts, nuts, etc. It will remove tar and paint, and clean nickel very nicely.

Use an atomizer and spray with a kerosene emulsion for bedbugs. If you are persistent you can dispose of them. When the hair tangles after an illness wet the comb in kerosene and you will find it a great help in combing. When stung by a bee apply kerosene and it will not pain or swell.

MY VINEGAR BOTTLE.

It stands on the shelf over the kitchen sink, and I use some of it on my hands every time I wash them—just a little rubbed in while the flesh is moist. It kills the alkali in the soap, and leaves the hands soft and smooth. If my stove does not polish easily I rub the surface with some of the vinegar, then have no trouble. Sometimes I put a little in the blacking.

Any fowl or tough meat may easily be boiled tender by adding a tablespoonful of vinegar. A brown paper saturated with it will heal a bruise or polish a tin. Vinegar and salt will clean copper or strengthen a weak back. Used hot with mullein leaves it is excellent for sprains. If I want to paper walls that have been whitewashed, I wash them thoroughly with vinegar, then the paper will stick. If there are any cracks to be filled I use plaster of paris mixed with vinegar, as that does not harden as rapidly as when water is used.

MY TURPENTINE BOTTLE.

It stands among my medicine supplies, plainly labeled. When we have a case of cold on the lungs I mix equal parts of turpentine, melted lard and camphor and rub lungs and throat with it, and cover with a flannel. This is repeated as often as mixture is absorbed. It invariably gives relief. It will remove fresh paint from clothing and if ammonia is added it will remove old spots which have become dry

GREAT AUCTION SALE!!!

SOUTHERN BRED CATTLE and HOGS
25 Registered Red Polled Cattle,

About evenly divided between bulls and heifers, and mostly yearlings. Raised in Walker County, Ga., below the quarantine line. : : : : :

25 REG. BERKSHIRE HOGS AND PIGS, including some fine Brood Sows.

DON'T MISS THIS GREAT SALE! Write for particulars. (The date and place not finally decided on when copy for this ad had to be sent in. Our Catalogue, ready after March 1st, will tell you. Be sure and send for it.)

C. E. BUEK, Proprietor.
G. F. WATSON, Manager.

KENSINGTON FARM, Kensington, Ga.

My Established Reputation



As a direct importer and breeder of the choicest strains of BERKSHIRE PIGS having now extended into almost every nook and corner of the U. S., I am encouraged thereby to try to do some good for my countrymen in the chicken business, hence I have built houses and yards for three popular strains: PLYMOUTH ROCKS, S. C. B. LEGHORNS and the "BLACK DEVIL" strain of Pit Games. Beautiful Pekin Ducks adorn

my premises. Cockerels and Ducks now ready for shipment. Orders booked for eggs.

THOS. S. WHITE, Fessifern Stock and Poultry Farm, Lexington, Va.

FOR SALE

SIX PURE-BRED

BERKSHIRE BOARS,

READY FOR SERVICE.

TEN PURE-BRED

BERKSHIRE SOWS, (Young.)

Also PIGS in PAIRS and TRIOS NO KIN.

FOREST HOME FARM, Purcellville, Va.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



WINDMILLS PUMPS

THE
DIAMOND
The greatest
Pumping
Mill made
for domestic
and hard
usage.

Water Pur-
fying Pumps
Iron Pumps
Wood Pumps
of every
Description.

TANKS

—STEEL STOCK TANKS—
of every description.
Great Saving in Freight.
This is our 61st year.

THE TEMPLE PUMP CO., Mfgs.
Meagher and Canal Streets, CHICAGO, ILL.

WOODSIDE BERKSHIRES

We are now booking orders for pigs May and June delivery, sired by my two great boars, LUSTRE'S CARLISLE OF BILTMORE, No. 72067, and MASTER LEE OF BILTMORE, No. 73979, and out of sows weighing from 500 to 600 pounds in only fair breeding condition.

Lustre's Carlisle, who will not be two years old until June, now weighs 620 pounds, and is as active as a six months old pig. He is sired by Royal Carlisle, No. 68313, dam Topper's Lustre, No. 54923. Master Lee is sired by Loyal Lee, 2d, of Biltmore, No. 56322, dam imported Danesfield Mistress, No. 73327, Loyal Lee, 2d, is undoubtedly the champion Berkshire boar of the world, having more prizes to his credit than any other boar living or dead.

Danesfield Mistress is a daughter of Danesfield Huntress, No. 68173, who has an unbroken record of first prize at all the leading English shows with one exception, and then being defeated by her daughter, Danesfield Mistress.

Besides being royally bred we consider Master Lee the best individual boar of his age we have ever seen, and predict that his get will make their mark in the show rings in 1906.

To show our confidence in what we offer and insure satisfaction to our customers, WE WILL SHIP PIGS TO RESPONSIBLE PARTIES ON APPROVAL. Address

WOODSIDE STOCK FARM,
CHARLOTTESVILLE, - - - VIRGINIA.



and hard. Saturate two or three times, then wash in hot soapsuds. The same combination is good to remove spots from colored silks.

In housecleaning my turpentine bottle is very useful. Carpets are sponged around edges with hot water containing turpentine, a tablespoonful to the quart. This is for moths or other pests, and is good to use wherever they are apt to be found. A little turpentine gives a gloss to starch.—American Agriculturist.

BREAKING IT GENTLY.

"An' did yez br-ek th' news iv Ca-a-sey's death to th' widdy, 'terrence?"

"I did, an' I did ut gintly. I said 'Good mornin', Mrs. Ca-a-sey; it's good luck yez're after havin' to-day,' sez I. 'An' phwat's the good luck?' sez she.

"Ye've come into a tidy sum iv money," sez I.

"The saints be praised!" sez she. 'An' where's th' money comin' from, Terrence?"

"From yer husban's life insurance," sez I. 'Sure he was kilt be th' blast this mornin'!"

In a court-room of one of the blue grass counties of Kentucky, General H—, a prominent lawyer of that region, was defending a prisoner charged with horse-stealing, and the witness was swearing as to the identity of the stolen horse.

"How do you know this is the same horse?" asked General H—.

"Well, I just know it is," said the witness.

"Well, how?" again asked General H—.

"I can't tell exactly how; but I know it as well as I know you, General H—."

"Well, how do you know that I am General H—?"

"Because, just before dinner, I heard Mr. C— say, 'General H—, let's go and take a drink,' and you went."

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Large Yorkshire Pigs,

NOW READY FOR SHIPMENT.

The large Yorkshires are more prolific, and will grow faster, and make make more and better bacon than any other breed.

— ALSO —

INDIAN GAMES, the best table fowl.

WHITE WYANDOTTES, the best for all purposes.

WHITE LEGHORNS, the greatest layers.

ADDRESS

BOWMONT FARMS. Salem, Va.

POLAND CHINAS.

I am now booking orders for choice spring pigs, many of which are out of sows I bought direct from some of the best herds of Ohio. A majority of these pigs are also sired by Great Big Tecumseh, 62301, a very superior boar, which I bought direct from J. J. Snyder, of Ohio. Great Big Tecumseh, 62301 weighed over 500 at 14 months old.

Also have a few boars, gilts and bred sows for sale at reduced prices.

I don't believe there is

a better bred herd of POLAND CHINAS in Virginia than mine, and their individuality is so good that I am willing to ship subject to return at my expense if not exactly as represented.

Write for prices and testimonials.

J. F. Durette,

Birdwood, Albemarle Co., Va.

THE - OAKS - STOCK - FARM.

A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

We breed and ship the FINEST STRAINS of

Large ENGLISH BERKSHIRES

for less money than any firm in the South, quality considered. Every pig shipped possesses individual merit. Pedigree furnished with all stock. 200 Gallons Cider Vinegar.

ALEX. HARMAN, Mgr., Lexington, Va.

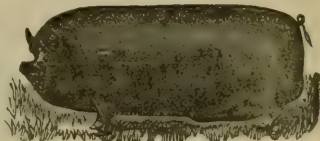
REGISTERED POLAND CHINAS.

Some choice Pigs, bred from the best, most popular and prolific strains. Fine individuality. Can furnish either sex. Stock guaranteed as represented.

PRICES LOW.

W. M. JONES'

Crofton, Va.



A TELEPHONE ON THE FARM.

Why not? Why shouldn't the farmer and his family enjoy the convenience of this modern time-saver? Why shouldn't the farm home be brightened in every way possible.

The great problem of keeping girls and boys contented on the farm would be solved in short order, if farm life had more of the luxuries and conveniences the city offers; if a large share of the monotony and isolation of farm life were dispelled.



The farmer himself would be greatly benefited by the adoption of some of the more necessary modern improvements his city brother employs in his home and business. For instance, the telephone. Every farm should have a telephone. If any business man in the wide world needs a telephone the farmer is that man. With a telephone the farmer, no matter how remote his location from the great centers of business, comes into close contact with the outside world. He may get the market reports every day and can sell his products when the market is right. Thus the extra price he may realize from a single crop often pays the entire cost of his telephone and the expense of his line. A telephone keeps the farmer in touch with his neighbors, gets help to him without delay of loss of time when help is needed or accidents occur, calls the doctor quickly, when emergencies arise.

Farmers are awakening to the numerous advantages of owning their own telephones and lines. Hundreds of farm lines are being built all over the country. The improved telephones and appliances built especially for farm lines by the Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., makes the building and operating of such lines a very simple and inexpensive proposition. No better instruments and apparatus are built, and the testimonials of hundreds of users prove that the success of their lines is due to the superiority of Stromberg-Carlson telephones. They are simple, do not get out of order, or require experts to operate them. They are built for durability and efficiency.

The Stromberg-Carlson Company will be glad to hear from farmers everywhere who are interested in knowing more about telephones and how to build and operate farm lines. They have a lot of valuable information which they will be glad to send free to farmers. Write for it.

INGLESIDE HEREFORDS

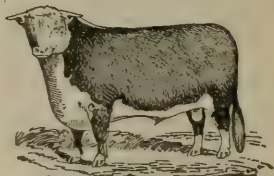
Nearly 200 head registered cattle in herd. Herd headed by the noted sire, ACTOR 3D, 55023, assisted by Actor 26th, 136283; Marmaduke 5th, 136303, and Mapleton, 189232, all of which won prizes at the St. Louis World Fair, including the Junior Championship, besides many other prizes at a number of Eastern and Western Fairs, including the International at Chicago.

They grow large, mature early, and the greatest grazers of any of the beef breeds, and for the economy of production of high class beef have no equal. A choice lot of bulls, cows and heifers for sale. Also in number of Polled Hereford bulls recorded in the National Polled Hereford records. Write for catalogue and prices, or, what is better, come and see the herd. Farm near Alderson, W. Va., on C. & O. R. R. Four trains each way daily. Address S. W. ANDERSON, Blaker Mills, Greenbrier Co., W. Va., Telegraph and Telephone Station, Alderson, W. Va.



ACTOR 26TH, 136283.

Bacon Hall Farm.
Hereford Cattle :- Berkshire Hogs
 REGISTERED—ALL AGES.
DORSET RAMS.
Toulouse Geese, Muscovy Ducks.
 MOTTO: Satisfaction or no sale.
E. M. GILLET & SON, - Glencoe, Maryland.



Grand Champion Prince Rupert, No. 79539.

Registered Hereford Cattle and Berkshire Hogs.

EDWARD GAY BUTLER, Anneland Farm, Berryville, Va.

Hereford Herd headed by Prince Rupert, No. 79539, whose son, Prince Rupert, 8th, won first prize in the 2-year-old class at the recent Chicago International show.

Berkshire Herd headed by Baron Premier, No. 55227, whose son "Admiral Schley" won first in the 6 to 12 months class at the International Show, 1902.

Young stock both calves and pigs for sale at reasonable prices.

CORRESPONDENCE INVITED.

Rosemont Farm.

Our offering this month is small, but very choice, consisting of 2 BULL CALVES by Acrobat, out of fashionably bred dams. Inquire for particulars etc. Every stockman and farmer should read

"A Brief History of Hereford Cattle"

which we will send free.

POSEMONT FARM, Berryville, Clarke Co., Va.



ACROBAT 58460.

POLAND CHINA
 AND
Tamworth Pigs

entitled to registration; also bred sows at reasonable prices.

APPLY TO J. C. GRAVES, Barboursville, Orange Co., Va.

**EDGEWOOD STOCK FARM**

has for sale, a few fancy

POLAND CHINA PIGS,

both sexes, of up-to-date

breeding. Do you need a fine pure bred pig of the nice, showy kind? If so, write me and do it now. One of my finely bred Boars should head your herd. My stock is the kind that pleases. Everything as represented. Customers in several States. Write for prices and testimonials. W. B. PAYNE, Propr., Crofton, Va.

— MORVEN PARK —

GUERNSEYS

The Property of WESTMORELAND DAVIS, Esq.

LARGE HERD OF FASHIONABLY BRED REGISTERED ANIMALS, INCLUDING COWS IN THE ADVANCED REGISTRY. HERD HEADED BY THE BRILLIANTLY BRED IMPORTED BULL,

TOP NOTCH No. 9023.

The Dam of this Bull, Imported ITCHEN BEDA, took 1st prize at the "Park Royal" Show in England in 1902, and her daughter ITCHEN BEDA II, took the same honors in 1904; further, Imported TOP NOTCH'S Dam, ITCHEN BEDA, entered the official advanced Registry of the American Guernsey Cattle Club this year with a record FOR THE YEAR of 10642.10 lbs. of milk; 548.70 lbs. of butter fat, equivalent to 640.15 lbs. of butter.

The Pedigree of Imported TOP NOTCH, with some of the achievements and prizes won in the direct line of his ancestry, are given below:

TOP NOTCH, 9023, bred by Sir Henry Tichborne, of England, was sired by Rival, 1343 E, and is out of imp. Itchen Beda, 15627. His father, Rival, by Rival of Mont March, 1154, P. S., out of Clatford Gentle, 4746, E. (first prize English Royal, B. & W. E. and Royal C., 1900). His mother, Itchen Beda, 15627 (see record above); she by Loyal of Hunguets, 978, P. S. (first prize, 1896, second prize, 1898); sire of Itchen Lady, Hayes Lily du Preel. His extended pedigree is impossible in this space, but will be furnished if desired. It goes back to winners of the Queen's prizes, as well as to members of her late Majesty's Prize Herd.

MORVEN PARK is situated in Loudoun County, Virginia, and because of its climate and soil is peculiarly adapted to the production of the highest class of animal life, and particularly to supply the needs of Southern breeders of pedigreed cattle.

REGISTERED and TUBERCULIN TESTED animals for sale, including a fine lot of BULL CALVES at reasonable prices.

For further particulars, Address

**LIVE STOCK DEPARTMENT, MORVEN PARK,
LEESBURG, LOUDOUN CO., VA.**

A RECOMPENSE.

Young Edward, aged six, was quite tired of staying in the house. His mother was ill and had tried to keep him in the room with her because her room was warmer than his play-room, but his toys were all in the playroom and he became restless to get to them.

"Good-by, mamma," he said, "I will come back in a thousand years."

"I will be dead and buried by that time, son."

The little fellow stopped a moment with his hand upon the door, and thinking of the Creed, he replied:

"Never mind, mamma, you will rise again."—Lippincott's.

A few features stand out prominently in the Review of Reviews table of contents for February: the editorial treatment of the Russian situation up to and including the outbreak of January 22d at St. Petersburg; the review of the Russo-Japanese war, apropos of the fall of Port Arthur and the close of a full year of hostilities; the discussion of Panama Canal problems by Minister John Barrett; the article on "Theodore Thomas and the Development of American Music," by W. J. Henderson; "Street Railway Fares in the United States," by Edward Dana Durand; "The Industrial and Commercial Outlook in Venezuela," by G. M. L. Brown; "Baltimore One Year After the Fire," by Day Allen Wiley; "Manhattan Bridge: A Lesson in Municipal Aesthetics," by G. W. Harris; "The Japanese Art of Jiu-Jitsu," by H. Irving Hancock; "What Justifies Intervention in War?" by Amos S. Hershey; "General Stoessel: Russian Defender of Port Arthur"; and "What the People Read in Scandinavia." There is the usual comment on topics of the day in "The Progress of the World," and the department of "Leading Articles of the Month."

The late Bishop Beckwith, of Georgia, was fond of his gun and spent much of his time hunting, says a representative from that State. One day the Bishop was out with his dog and gun and met a member of his parish, whom he reproved for inattention to his religious duties.

"You should attend church and read your Bible," said the Bishop.

"I do read my Bible, Bishop," was the answer, "and I don't find any mention of the apostles going a-shooting."

"No," replied the Bishop, "the shooting was very bad in Palestine, so they went fishing instead."

GIBSON'S LIQUID LICE KILLER

Painted on the roosts and drop boards of your poultry houses will thoroughly rid your fowls and buildings of lice and mites. Also KILLS LICE ON CATTLE, HOGS AND HORSES. EASILY APPLIED, AND SURE DEATH TO ALL LICE. Try it at our expense. We will refund your money if it don't kill the lice. One-half gallon can, 60c.; gallon can, \$1.00.

Gibson's "Insect Powder" is the best louse powder on the market. A trial box will convince you. 10c. at your dealer's, or 15c. postpaid. 100 ounces by express, \$1. Agents wanted.

GIBSON & LAMB, Box 128, W. Alexander, Pa.

Grazing for 100 Cattle.

Rate \$3.00 per head for the whole Summer until November 1st.

Special Rates for Herds of Twenty and over. ❖ ❖ ❖ ❖

Also Pasturage for a few Horses at \$1.00 per Month.

Applications should be made early. Address

BULLFIELD FARMS, Doswell, Va.

ANGORA GOATS.

Our Spring Kids will soon be in, and we are now booking orders for them.

Largest and finest Herd east of the Mississippi. Come and see us or write.

DIAMOND V RANCH, - - - - - Rock Castle, Va.

EDGEWOOD STOCK FARM.

❖ ❖ DORSETS. ❖ ❖

Our FALL LAMBS are here, friends, and they are crackerjacks. Our Imported Ewes started lambing October 15th. Better give us your orders now. Last year many of you were too late.

J. D. and H. B. ARBUCKLE. Maxwellton, Greenbrier, Co., W. Va.



ORGANIZED 1832.

ASSETS, \$932,050.00.

Virginia Fire and Marine

Insurance Company, of Richmond, Va.

Insures Against Fire and Lightning.

All descriptions of property in country and town, private or public, insured at fair rates, on accommodating terms.

AGENCIES IN EVERY TOWN AND COUNTY.

W. H. PALMER, President.

W. H. McCARTHY, Secretary.

It Makes the Most Dollars for You.

THERE ARE REASONS FOR IT.

That's the Easy Running

Send to-day for proof.

EMPIRE Cream Separator

Empire Cream Separator Company, Bloomfield, New Jersey.
Implement Company, Sales Agent, Richmond, Va.



WILKES. =: NUTWOOD.

WEALTH 29579; Record 2.10

Sire Gambetta Wilkes 2.19 $\frac{1}{4}$, the leading sire of 2.10 performers and one of the greatest living sire having 165 of his get in the 2.30 list; he the son of the immortal George Wilkes 2.22. Dam Magnolia by Norfolk, he by Nutwood 2.18 $\frac{3}{4}$ sire of 178 and of dams of 237.

Wealth 2.10 is dark bay, 16 hands high, weight 1,200

Mares sent here will receive best of care at \$1.50 per month on grass; on grain at cost of same.



lbs. of beautiful shape, style and finish. He represents the cream of the trotting families being a cross of Wilkes on Nutwood blood with strong thoroughbred foundation.

Fee \$20.00 the season with usual return privilege.

S. F. CHAPMAN,
Clifton Farm. - - - - - Gordonsville, Va.

ANTRIM STUD.
CHORISTER,
Bay horse, 16.1; 1,200 pounds, by Palestio; dam, Addle C., by King Alfonso.
"One of the handsomest thoroughbreds in America, and a sure success as a getter of race horse."—Major Danglerfield.

ROEHAMPTON,
ROEHAMPTON, chestnut horse, 16.0; 1200 pounds, by Imp. Bathampton, dam Agnes Flash. Roehampton was a great race horse. Fee for either horse \$50 cash, approved half bred mares, \$20. Address DION K. KERR, Warrenton, Va.

BURLINGTON,
"The Gentleman in Black."
Winner of the Criterion Stakes, Felham Handicap, Brooklyn Derby, Belmont, Trial and Tidal Stakes.
Black horse, by Powhatan, dam Imp. Invercauld, by St. Albans; 2d dam Imp. Miesner, by Voltigeur; 3d Themia, by Touchstone. Fee \$50 for season of 1905, with usual return privilege. For particulars, address

J. E. LANE,
WOODMOND STOCK FARM,
Emout, Albemarle County, Va.

PRINCE HENRY,
Chestnut horse, trotter, 16.1, 1150 lbs., foaled 1902 by Patronage, 4143, dam Hazel Eye, by Sir Walter, Jr., 21334. Patronage got Auz, 2:03 $\frac{1}{2}$.

VALMONT
thoroughbred chestnut horse, 16.1 1200 lbs., by Norwood, dam Jeanette, by Northumberland. Fee, \$10 season; \$15 insurance. Address L. L. WALLACE, Amelia, Va.

FOR SALE,
Same choice thoroughbred brood mares, bred to Chorister. Address DION K. KERR, Antrim Stock Farm, Warrenton, Va.

KELLY, 22823.
Record 2:27. Sire of McChesney, 2:16 $\frac{1}{4}$, etc.
Bay horse by Electioneer 125; dam, Esther, dam of Expressive, 3, 2:12 $\frac{1}{2}$, and 3 others in the list; Kelly represents the highest type of a trotter, having fine size and the form and finish of a thoroughbred. For terms of service and keep of mares, address W. J. CARTER, P. O. Box 929, Richmond, Va., or 1102 Hull street, Manchester, Va. Phone 3380.

Richardson Brothers,
613 Brook Ave., Richmond, Va.,
BUILDERS OF
Wagons and Carriages,
Repairing neatly done. Orders by mail solicited.

W. J. CARTER,
TURF JOURNALIST and
PEDIGREE EXPERT...
ADDRESS:

P. O. Box 929, Richmond, Va.
Or 1102 Hull St., Manchester, Va. PHONE 3380.
Representing "The Times-Dispatch" and "Southern Planter," Richmond, Va.; "Kentucky Stock Farm," and "The Thoroughbred Record," Lexington, Ky.; "Sports of the Times," New York, and the "Breeder and Sportman," San Francisco, Cal.

Andrew Carnegie, 38961.
Bay horse, foaled 1903, by Giles Mebane, 2:16 $\frac{1}{2}$, son of John R. Gentry, 2:00 $\frac{1}{2}$; dam, Virginia Menefee, 2:33, by Gregorian, 1:55 $\frac{1}{2}$; second dam, Minnie Ronch, by Ariston, 7:11.
FEE, \$25 the season, with return privilege. Address RIVER FALLS FARM, Graham, N. C., or J. W. MENEFEE, Greensboro, N. C.

Plain Dealing Farm,
Property of W. N. WILMER.

VIRGINIA CHIEF, 26267,
Black horse, 16 hands high, weight, 1,200 pounds. Sired by Kentucky Prince, 2479; dam Nina, by Messenger Duroc, 106.
Fee, \$10 season; \$15 insurance.

AEBINEER, 30932,
Chestnut horse, 15.3 hands, weight 1,100 pounds. Sired by Virginia Chief, 26267; dam Aebina, by Alban, 5332.
Fee, \$8 season; \$12 insurance.

PLAIN DEALING, 30921,
Chestnut horse, 15.1 hands, weight 1,050 pounds. Sired by Virginia Chief, 26267; dam Barbara, by Alcantara, 729.

FEE \$10 INSURANCE. Address PLAIN DEALING STOCK FARM, Scottsville, Albemarle Co., Va.

FOR SALE,
the registered trotting stallion
LEPANTO, 0577,
handsome bay horse, 15.1 hands 1200 lbs.
Address BANNISTER & RHODES Roanoke, Va.

AINSLIE CARRIAGE CO.,
10 S. 10th St., Richmond, Va.

Builders and designers of fine pleasure and business vehicles of every description. Repairing a specialty. Mail orders solicited.

D. A. BROWN'S SON
MARVEY C. BROWN
IMPORTER AND MANUFACTURER OF
ENGLISH SADDLES, BRIDLES, WHIPS,
SPURS, LEGGINGS. The largest assortment of
HORSE SHOW GOODS in Virginia.
726 East Main Street, Richmond, Va.

THE BACKBONE OF AMERICA.

In an editorial of one of the great New York dailies a short time ago, the question of appropriations for army and navy improvements was exhaustively dealt with. In the course of its preamble, the term "backbone of America" was applied to these great forces for the country's protection and prestige.

Curiously enough the J. Stevens Arms and Tool Company, of Chicopee Falls, Mass., (manufacturers of the famous Stevens rifles and shot guns) have taken issue as to the truth of this application. They maintain that the Army and Navy are more the outgrowth of the "backbone of the country" rather than the backbone itself—that we must go a little further back; back to America's youngest sons—the strong, manly, out-door-boys who have been taught the use of rifles and shot guns in the open country and on the farm.

This expression of opinion is quite in line with the educational movement inaugurated some years ago by these people and since carried on by them throughout the country. It must be admitted by every reasoning person that the arguments advanced are sound, to the effect that the ownership of a gun develops a boy's manly qualities, gives him a clear eye, a steady hand, cool nerve and judgment.

The J. Stevens Arms and Tool Company, we understand, have recently compiled an elaborate 140-page book containing much interesting information relative to this fascinating out-door sport, which they will send free to any one sending their name and four cents in stamps to cover cost of mailing.

An unusually liberal offer is made by G. M. Ditto, Joliet, Ill., on his Ditto's Triple Geared, Ball-Bearing Feed Grinder. He will send one to any of our readers for ten days' use without charge, with the understanding that the mill can be returned in case it is not of lighter draft and greater capacity than any other feed mill on the market. It's a good offer and a good mill. Write to-day for his illustrated book on "Feed Grinders."

In writing mention Southern Planter

THE SMITH Great Western Endless Apron Manure Spreader



SPREADS all kinds of manure, straw stack bottoms and commercial fertilizer regardless of their condition. Spreads as much in a day as 15 men can by hand. Spreads the largest load in 2 to 4 minutes. Makes the same amount of manure go three times as far and produce better results; makes all manure fine and immediately available for plant food.

NON-BUNCHABLE RAKE forms a hopper, holds all hard chunks in contact with beater until thoroughly pulverized.

ENDLESS APRON is one continuous apron, (not a ½ apron) therefore always ready to load. You don't have to drive a certain distance to pull it back into position after each load or wind it back by hand; it is a great advantage in making long hauls.

THERE IS NO GEARING because the team is near the load as it can work. Front and rear axles are does not extend below axle. Spreads evenly from start to finish and cleans out perfectly clean.

HOOD AND END GATE keeps manure away from beater while loading; prevents choking of beater and throwing out a bunch when starting and acts as wind shield when spreading. It has a graduating lever and can be regulated while in motion to spread thick or thin, 3 to 25 loads per acre.

LIGHT DRAFT because the load is nearly equally balanced on front and rear axles. The team is as near the load as it can work. Front and rear axles are the same length and wheels track; beater shaft runs in ball and socket bearings, therefore no friction. Beater is 33 inches in diameter, seat turns over when loading. Machine turns in its own length.

SIMPLICITY There are only two levers on our machine. One which raises the hood, locks it and throws the machine in gear at the same time. It can then be thrown in and out of gear without lowering the hood. One lever which changes feed to spread thick or thin, making it so simple that a boy who can drive a team can handle it.

STRENGTH AND DURABILITY is one of the most important points to be considered in a manure spreader. The Great Western has a good, strong, durable wheel. Extra strong spoke and rim, heavy steel tires. Strong, well braced box with heavy oak sill. Oak tongue, hickory doubletrees, malleable castings, gears and sprockets all keyed on. Galvanized hood. Every part is made extra strong, regardless of cost. It is made for the man who wants the best; made in four sizes, 30, 35, 40, 70 and 100 bushel capacity.

GUARANTEE Should any part break, wear out or get out of order within one year we replace free of charge. Send for free catalogue, showing latest improvements. It tells how to apply manure to secure best results.

SMITH MANURE SPREADER CO.

15 S. Clinton Street,

CHICAGO, ILL.

Buy the Success Manure Spreader



and avoid all mistakes. The first cost of such a machine is considerable and you owe it to yourself to get the right one in the first place. We have been making Manure Spreaders for 25 years and know that the Success is right. Another proof is that there are more of our machines in use than of all other makes combined. Spreading any kind of manure, in any condition, lime, salt, ashes, plaster and fertilizer, broadcast or in drills, simplest, strongest, lightest draft, easiest to load, and most durable. Full guarantee. Send for our book on Farm Fertility. It tells the complete story of the Success Manure Spreader. We mail it free.

Kemp & Burpee Manufacturing Co., Box 205, Syracuse, N. Y.

New Steel Roofing and Siding \$2.00 per 100 Sq. Ft.

Painted red on both sides. Most durable and economical covering for Roofing, Siding or Ceiling for Residences, Houses, Barns, Sheds, Elevators, Stores, Churches, Poultry Houses, Cribbs, etc. Easier to lay and will last longer than any other covering. Cheaper than shingles or slate. No experience necessary. A hammer or hatchet the only tools needed. It is semi-hardened high grade steel. \$2.00 is our price for the flat. Corrugated as shown in cut, or "V" crimped or standing seam costs \$2.10 per 100 square feet. We offer Pressed Brick Siding and Beaded Ceiling or Siding at \$2.25 per 100 square feet. Thousands of buildings throughout the world are covered with this steel roofing and siding, making their buildings

FIRE, WATER AND LIGHTNING PROOF.

Send in your order for as many squares as you may need to cover your new or old building. Time will prove its enduring qualities. Withstands the elements, best of all roofings. At prices noted in this advertisement.

WE PAY THE FREIGHT

to all points East of Colorado, except Indian Territory, Oklahoma and Texas. Write for prices for shipment to such points. Ask for further particulars. Immediate shipment order at once. Satisfaction guaranteed or money refunded. On special catalogue No. K-166 tells all about this roofing. It also quotes low prices on Building Material, Wire, Pipe, Plumbing, Sash, Doors, Furniture, Household Goods, Down Spouting, Eave Trough and thousands of other items bought by "K-Sheriff" and Receivers Sale.

If you sell as your order at once. Satisfaction guaranteed or money refunded. On special catalogue No. K-166 tells all about this roofing. It also quotes low prices on Building Material, Wire, Pipe, Plumbing, Sash, Doors, Furniture, Household Goods, Down Spouting, Eave Trough and thousands of other items bought by "K-Sheriff" and Receivers Sale.



CHICAGO HOUSE WRECKING CO., 35TH AND IRON STS., CHICAGO.

SETTING HIMSELF STRAIGHT.

George Washington Thomas, an able-bodied negro of Sleepy Hollow, appeared before Magistrate Nussbaum charged with stealing chickens. The negro accompanied by his lawyer, Colonel Simmons, a rising young white attorney. The old judge sauntered into the dingy court-room where he had reigned for more than twenty years, and after calling for order he looked around on the little company there assembled. Seeing George Washington Thomas, he pointed to him and said:

"Be you the defendant in this case?"

Quick as a flash George was on his feet, and, not understanding legal terms, he exclaimed politely:

"No, sah; no, sah; I ain't de 'fen'ant; dar's de 'fen'ant ovar dar." And saying which, he pointed to his lawyer. There was a general laugh about the room, in which the queer old judge joined heartily. The ducky felt abashed. He was visibly embarrassed, and, thinking to correct the mistake, if mistake it were, he said again, pointing at his lawyer, "Yas, sah; he's de 'fen'ant," and, pointing to himself, he said, "I'se de gent'man what stole de chickens."—Lippincott's.

DAIRYING IN THE SOUTH.

One of the most encouraging signs of the time throughout the entire South is the awakened interest manifested in the past few years in dairying. The Southern States are ideally adapted to this branch of agriculture and a good many farmers have discovered that there is good money in the milk cow. This is especially true since the advent of the hand-power cream separator, which adds from 25 to 40 per cent to the profit of each cow. It is a question which our readers should thoroughly investigate, not only on account of the ready money the milk cow brings in every week, but, also, because of the good effect upon the farm in general, which follows the introduction of a dairy herd. Indeed, if the cows did not yield a good profit directly, they would still be a paying investment on account of their value to the fertility of the land.

•But there is one thing to be remembered; milk cows will not pay unless they are managed in an up-to-date, modern manner. The man with four or five cows needs a cream separator, both to save labor and worry, and to increase his profits. The EMPIRE Cream Separator Co., Bloomfield, N. J., has some interesting literature on this subject. Send to them for it, or address their agent,

IMPLEMENT CO., RICHMOND, VA.

Mention the SOUTHERN PLANTER in writing.

J. S. KEMP'S 20 CENTURY MANURE SPREADER



THE FARMER'S MONEY MAKER

Why the 20th Century is one of the best investments a farmer can make; why it saves time, money, patience, and increases the farmer's bank account; why it is durable, strong, needs few repairs; how it withstands hard usage without harming it; how it increases the fertility value of manure, how it advances the market value of every square foot of ground it runs over, these, with a hundred and one other questions vital to every farmer, are answered in our handsome, new, free catalog No A-20. Write for it. Read it.

The J. S. Kemp Manufacturing Company

Newark Valley, N. Y.

Waterloo, Iowa

Spring Flexible Disc Harrow

Only Harrow in the world with independent adjustable spring pressure upon inner ends of disc gangs. Any amount of pressure thrown on these inner ends by foot. Ball-bearing. Works uneven ground. All sizes, at proportionate prices.



Seasonable Implements of the latest style, always up-to-date. Possibly you are now or will soon need a Corn Sheller, Feed Cutter, Disc Plow. You can get our Catalogue for the asking.

OUR PRICES MUST BE RIGHT.

NORFOLK FARM SUPPLY CO.

41-51 Union Street, NORFOLK, VA.

Mention THE SOUTHERN PLANTER when corresponding with advertisers.

DON'T BUY GASOLINE ENGINES

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline engine superior to all one cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon. At small cost—portable, easy to traction. Mention this paper. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mfrs., Meagher & 15th Sts., Chicago, THIS IS OUR FIFTY-FIRST YEAR.

MAKE MONEY WITH YOUR INCUBATOR.

Thousands do every year and they might make more. A few here and there do not, because they do not use good common sense in their work. A very practical book, "How to Make and Save Money with Incubators and Brooders," has been issued by Channon, Snow & Co., of Quincy, Ill., makers of the New Idea Incubators and Brooders which will undoubtedly help any one who is trying to make money out of poultry. These people are the originators of the plan for "Building Your Own Incubator" which has been extensively advertised in these columns. Thousands during the last few years have given this plan actual test and have proven that it is entirely practical. If you want to get a first-class incubator at a small outlay of cash write to Channon, Snow & Co., Dept. 158, Quincy, Ill., and they will send you a free copy of this valuable book which explains everything clearly.

JOHNSTON HARVESTER CO.

Among the new advertisers in the SOUTHERN PLANTER this season is the Johnston Harvester Co., Batavia, N. Y. This company is using quite a liberal space in introducing their celebrated line of machinery to our readers. This company was a "Blue Ribboner" at St. Louis. Many of our readers are already using goods manufactured by this company, and those who are not, we would suggest that they look up its ad., and send for catalogues, circulars, etc. Mention the SOUTHERN Planter when doing so.

PROSPEROUS YEAR FOR THE ÆTNA.

The Ætna Life Insurance has a condensed statement of its business for 1904 in another column, to which we invite the attention of parties who are now carrying life insurance or those who contemplate doing so. This old company shows a steady increase in its business year after year, this too, without having been connected with any of the wild cat schemes charged against several other life insurance companies.

BERKSHIRE HOGS AT GLENBURN.

Editor Southern Planter:
Dear Sir:—I am pleased to report that I have had very good results from my advertisement in your valuable paper. I have just sent an order to England for three Berkshire sows and a boar that won first prize at the English Royal in 1904. So you see that I am keeping abreast of the times, and Virginians need not send out of the State to get imported blood, and the very best that can be procured in England.

Yours truly,

DR. J. D. KIRK,

Roanoke, Va., February 11, 1905.

Try a Buggy at Our Expense

Do you want a new buggy? Will you try our

MODEL TOP BUGGY



If we send it to you, give you One Full Month's Free Trial use of it, a written, binding, Two-Year Full Guarantee and agree positively, without any restriction, to take it back if it does not suit you in every way and Refund Every Cent of the Money you have paid for freight or other expenses.

This is not an offer for small boys or irresponsible people, but is made in good faith to any responsible party who wants and is willing to pay the wholesale price of a strictly first-class, high-grade, right up-to-date top buggy.

A simple request, either by postal or letter, will bring you our new 1905 Illustrated Vehicle and Harness Catalogue.

Our Model Top Buggy

is equipped with 100 strong and attractive features. Has 100-Mile Just-Proof Axles, Quick-Shift Shaft Couplings, Sewed-Rim Wheels, Velvet Carpet, Water-Proof Boot, Genuine Best Quality Leather Quarter Top, Roller Knu Traps, Rubber Padded Seats, Strong and Substantial Full Trained Gear, Best Shell Bark Thoroughly Tested Hickory Wheels fitted with Kynch Oral Edge Steel Tires, and is painted the equal in durability, style and finish to the highest priced buggy on the market.

Write for full description and information as to how we will send you this buggy so that you can try it fully without one cent of cost to you. If you do not want to buy a buggy, then tell some friend about the most wonderful buggy offer ever made by anyone, and have him write for our catalogue. Address

The Model Carriage and Harness Co. 105 Sixth St., Cincinnati, O.

32 YEARS SELLING DIRECT

We are the largest manufacturers of vehicles and harness in the world selling to consumers exclusively.

We Have No Agents



No. 628. Leather Top Buggy with Leather Covered Boxes and 3 1/2 inch rubber tires. Price complete \$68. As good as sells for \$75 more.

but ship anywhere for examination and approval, guaranteeing safe delivery. You are out nothing if not satisfied as to style, quality and price. We make 200 styles of vehicles and 65 styles of harness.

Our large Catalogue is FREE. Send for it.

Elkhart Carriage & Harness Mfg. Co., Elkhart, Indiana.



No. 927. Canopy Top Surrey. Price complete \$73. As good as sells for \$75 more.

Turn Fruit into Gold

Orchards, sprayed three times a year with the

SPRAMOTOR

produce 80% more revenue than those alongside of them that have not been sprayed. The Spramotor is an Insurance Policy that meets its own payments. Absolutely prevents Insect and Fungal Pests.

The Canadian Government used two power Spramotors last year to demonstrate the benefits from Co-operative Spraying.

Write for booklet "A". It's free and gives full particulars about Fruit Spraying and its benefits.

SPRAMOTOR CO.

Agents wanted. Buffalo, N.Y., London, Canada.

THE \$50,000,000 WORLD'S FAIR, ST. LOUIS 1904

BOUGHT BY THE CHICAGO HOUSE WRECKING CO. Millions of Dollars' worth of material will be placed on the market for quick sale by us at prices that will mean an enormous saving to purchasers. Now is your opportunity to put into execution your long contemplated improvements.

100,000,000 FEET OF HIGH GRADE LUMBER FOR SALE

The time to buy Lumber is today. Even if you do not need any Lumber today, it will pay you to purchase it now and store it for future use. It's better than to have it in the bank. Buy quick, because the price at which we will offer this material is bound to sell it as fast as we can make delivery. The finest grades of Lumber were used in the construction of this Grand Exposition. We have everything needed in the construction and furnishing of a building for any purpose.

SEND US YOUR LUMBER BILL FOR OUR ESTIMATE

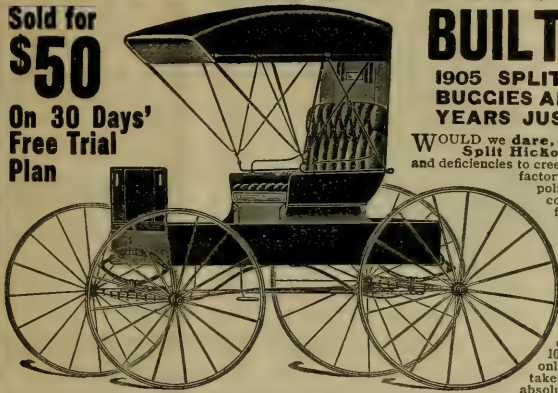
YOU CAN SAVE FROM 30% TO 80% IF YOU BUY AT ONCE. This is your opportunity to build or improve your Home, Barn, Warehouse, Church, Elevator, Tool Shed, Granary and Crib, Store, School House, and in fact any kind of a building. We can furnish you anything in the line of Manufactured Articles, Roofing of all kinds, Wire Fencing, Pine Furniture and thousands of other things. ASK FOR OUR SPECIAL CATALOGUE.

CHICAGO HOUSE WRECKING CO., EXPOSITION GROUNDS, ST. LOUIS, MO.

SPLIT HICKORY BUGGIES

Sold for
\$50

On 30 Days'
Free Trial
Plan



BUILT "ON HONOR"

1905 SPLIT HICKORY SPECIAL TOP
BUGGIES ARE GUARANTEED FOR TWO
YEARS JUST FOR THAT REASON.

WOULD we dare, even were we so inclined, slight the construction of Split Hickory Special Top Buggies and allow flaws and deficiencies to creep in, when each and every buggy goes out with a factory guarantee good for two years? Not! Such a policy would be ruinous to our business, for within a comparatively short time letters of complaint would flood our office and the profits on our business would soon be swept away. It's because we know that every stick of timber that enters into the making of our vehicles is split hickory (not sawed) thoroughly seasoned and with the wear of iron in it, and that all other materials used are the best that money can buy, that we give this guarantee. It's because we employ the most skilled and competent workmen in the carriage trade that we guarantee workmanship as well as materials. Our buggy bodies have a 16-coat foundation of paint, oil and lead, and all woodwork is carried 100 days in pure oil and lead before priming. This only gives you an idea of the almost infinite pains we take in every part of our immense factory, to insure absolutely perfect results.

We have no agents. We deal with the people direct, through advertising in reliable publications, and give them the benefit of the wholesale price. We have the powerful influence of the editors back of us, who reinforce our guarantee with their own, affording their readers double protection. During all the years that we have been selling to the users direct through advertising, not one editor has received a complaint from a subscriber, that Split Hickory Buggies were not as represented. It is a record to be proud of, because we've earned it by fair dealing.

Our 1905 Split Hickory Special is in a class by itself. Here are some of the exclusive features that place it there:
Long Distance Colling collar axles, quick shifters, Padded Patent Leather Dash, Rubber Padded Steps, Roller Rub Irons, Full Length Storm Apron, No. 1 Best Quality Leather Quarter Top, all Wool Headlining, 16 ounce Green Broad cloth Cushion and Back, Spring Cushion and Panel Spring Back, Boot, Full Length Velvet Carpet, Arched or Dropped Axles, Choice of any width of Body, Either Three or Four Bow Top. Reinforced Shafts with Heel and Corner Braces.

We also manufacture a full line of Buggies of all styles, Driving Wagons, Runabouts, Phaetons, Stanhopes, Surreys, Carriages, Spring Wagons, Carts and Harness. Our Split Hickory Catalogue for 1905 has 192 pages and is by far the handsomest we have ever issued. It explains fully our liberal terms of sale, quotes absolutely lowest wholesale prices and is elaborately illustrated. Sent free on request. Write us at once.

THE OHIO CARRIAGE MANUFACTURING CO. (H. C. Phelps, Pres.) STATION 294, CINCINNATI, O.

DETERMINED TO BE THE FIRST.

A mother of three little boys who had gone to the country to spend the summer received the following postal from the eldest:

"Dear Mother: I wanted to be the first to write to you, so wrote this before I left home, and will mail it when we reach Livingston. We are all well and sound.

"Excuse the writing, because you keep coming into the room. Your loving son,

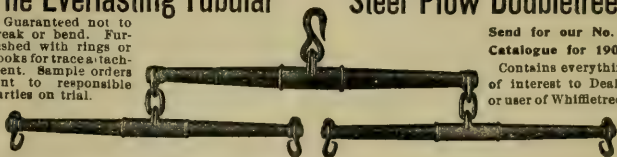
"WILLIAM.

The mother had said she would send a dime to the one who wrote the first, and Master William had determined to beat his brothers, so he literally "took time by the forelock."—Lippincott's.

For fencing poultry there is nothing better than the Union Lock Poultry Fencing, manufactured by Case Bros., Colchester, Conn. It will not sag, will withstand all temperatures, will keep in small chicks, yet is heavy enough to use as a division fence against small animals. An extra heavy fence is made which will turn both stock and poultry, including small chicks. It is superior to all other kinds of fence in that it can be used on uneven ground without sagging or buckling, simply by placing the

The Everlasting Tubular

Guaranteed not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



PATTERN No. 105 EQUIPPED WITH FORGED TRIMMINGS.

Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

Pittsburg Tubular Steel Whiffletree Company,

SOLE MANUFACTURERS

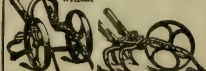
PITTSBURG, - - PENNSYLVANIA.

MATTHEW'S "NEW UNIVERSAL" GARDEN TOOLS.

6 STYLES SEEDERS
Opens furrows
row, drops
in plain
sight,
covers,
marks.



Double or Single Wheel Hoe,
Cultivator, Plow, Rake. Changes quickly made. Cultivate between or outside the rows. Any depth, any width.



Note High Arch and Plant Guards.
Sent Oak Handles on all Tools.

6 Tools in 1.

Combined seeder, marker, hoe, rake, plow, cultivator. Single or double wheel. Every adjustment easily made. For planting and all kinds of cultivation.



Send for FREE BOOKLET of valuable information for planting and cultivating the garden and full description of these implements.

AMES PLOW COMPANY, 56 MARKET STREET, BOSTON, MASS.

For sale by GRIFFITH & TURNER CO., Baltimore, Md.

posts on highest and lowest places. This fencing is shipped direct to farmers and poultrymen from mills in Connecticut, Illinois and California. Note the advertisement in another column.

CATALOGUES.

J. S. Kemp, Manufacturing Company, Newark Valley, N. Y., and Waterloo, Ia. This is one of the most attractive catalogues we have seen this season. It is very handsomely gotten up and as an art production, is certainly a credit to the house whose machines it describes so entertainingly. This company has an ad in this issue and would be pleased to mail you this catalogue if you are at all interested in manure spreaders.

T. W. Wood & Sons, seedsmen, Richmond, Va., 25th anniversary catalogue of this well known Southern seed house. Beautifully got up and interesting in every page. Free on application.

Bateman Manufacturing Company, Grenloch, N. J.; the "Iron Age" catalogue of farm and garden implements. A very striking cover and a most interesting story of probably the best tools of the kind ever used by farmers. A card addressed to Box 167, Grenloch, N. J., will fetch it.

J. W. Hall, Marion Station, Md., 25th annual catalogue of the Somerset Fruit, Seed and Plant Farms. Mr. Hall, who has advertised with us for several years, would like to mail this catalogue to all who are interested in good berries, seed potatoes, etc.

The Iowa Incubator Company, Des Moines, Ia., the Dollar Making Incubator proposition. The catalogue of this company bearing the above title, is well worth sending for. While describing its own incubators admirably, it also gives other valuable poultry hints.

W. Smith Grubber Company, La Crosse, Wis. This firm has been advertising its Stump Pullers with us this season quite extensively. These pullers are described and priced in interesting circulars which will be mailed free on application.

The Whalebone Carriage & Harness Company, Cincinnati, O.; the Model Carriage & Harness Company, Cincinnati, O. A very beautiful and comprehensive catalogue descriptive of the vehicles and harness it advertises in this issue.

The Johnston Harvester Company, Batavia, N. Y. Be sure and send for this company's catalogue. It is well worth having. It is artistic and describes entertainingly and illustrates well its full line of machines which it is offering our readers.

Ames Plow Company, Boston, Mass. Matthew's New Universal Market Gardeners tools. This is a neat catalogue and all truckers and gardeners should send for it.

Western Seed Company, Shenandoah, Ia.; twenty-first annual catalogue.

Coiled Spring Fence

STRONGEST AND BEST FENCE MADE.

It is made so good that all requirements of the farm are fully met. So closely woven the small pig cannot "wiggle" through. So strong the Bull cannot "faze" it. So heavily galvanized the elements cannot rust or corrode it. So durable that it is the last to yield to the ravages of Father Time. Sold on such liberal terms that a

THIRTY DAYS FREE TRIAL

Is given each customer that he may be sure he is satisfied and his money is returned to him if he is not.

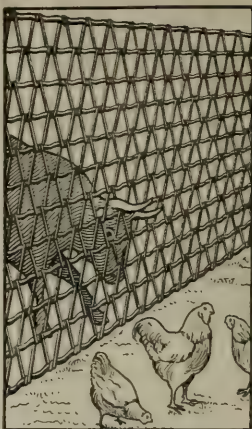
Buy Direct. It saves the profit of the middleman. Our Guarantee is all that any manufacturer can give, and infinitely more than the dealer can grant. When you deal with us you get your money back if you are not pleased, besides it means a great saving because we sell to you at

WHOLESALE PRICES AND PREPAY THE FREIGHT.

We use nothing but High Carbon Spring Steel Wire, and make it ourselves that we may be sure it is good. We coil it that it may provide for Contraction and Expansion. We Heavily Galvanize it with Commercially Pure Spelter, to avoid rust and corrosion in all climates.

Our long experience has made us masters of fence construction and we are able to tell you we make the strongest and best fence on the market. We have a 40-page Catalog which fully describes and illustrates every style of our High Carbon Coiled Spring Farm Fence, which we will gladly mail to you upon request. Write for it. Address,

COILED SPRING FENCE COMPANY
Box 52 WINCHESTER, INDIANA.



Union Lock Poultry Fencing



As it Looks When Erected.

This fence is put up in 10 and 20 rod rolls. We accept orders for any number of rods or rolls, and pay freight on orders for \$10. or over almost everywhere. We have poultry yard gates covered with this fence. They open both ways; are very convenient, durable and sightly. Price list free. We have sold

UNION LOCK POULTRY AND FIELD FENCE for over 5 years to farmers and poultrymen. You will find the quality and our prices satisfactory. Send your order now and be ready for an early spring.

CASE BROTHERS, 12 MAIN STREET, COLCHESTER, CONNECTICUT.

Factory Net Price List.

Regular.	Extra Heavy
19 & 20 Wire.	No. 17 Wire.
34 inch per rod, \$.28	34 inch, \$.48
36 " " " .35	36 " " .50
48 " " " .42	48 " " .70
60 " " " .48	60 " " .85
72 " " " .54	72 " " .93
84 " " " .60	84 " " 1.00

Things To Know About PAGE FENCE Horizontal wires, double strength, high-carbon, spring steel. More than twice as strong as common fence wire of same size. Top wire No. 7 and second wire No. 9 will support the weight of 30 men. Think of it! By actual test our No. 7 wire has 3560 pounds strength. Common fence wire No 7 has only 1540 pounds strength, giving wire used in the construction of Page Fence 1920 pounds strength over common wire. Horizontal wires in the

PAGE FENCE



coiled lengthwise, making a continuous coil spring that contracts and expands to meet the climatic conditions and hugs uneven ground, insuring a taut, well-stretched fence at all times. Two top wires woven separately and joined to balance of fence with loop, which makes our famous Page Sliding Top. Heavy pressure from stock rubbing or people climbing over Page Fence is taken up by two top wires without bearing on remainder of fence, which protects the cross wires of the fence.

Mr. Austin Pitts, Rollin, Mich., writes us under date of Jan. 14, 1904: "I have 80 rods of Page Fence that has been in use for 19 years and has had no repairs excepting new posts. It has given me great satisfaction, and from present appearances will be a faithful servant through all my declining years."

Write for free lithographed catalog and photograph showing this 19-year-old fence.

PAGE WOVEN WIRE FENCE COMPANY, Box 514 ADRIAN, MICHIGAN

DeLOACH PATENT
Avoid imitations and infringers and buy the Genuine. Saw Mills, 111 E. and up. Shingle, Planer, Lath and Cora Mills, four Storage Bay Presses, Water Wheels.
DeLOACH MILL MFG. CO., Box 600, Atlanta, Ga.

S A W M I L L S

YAGER'S

COMPOUND EXTRACT

SARSAPARILLA

WITH

CELERY.

THE TWO ..MARVELS..



YAGER'S

CREAM CHLOROFORM

LINIMENT,

FOR

MAN OR BEAST

This remedy has a world-wide reputation — established by its merit—as the greatest of all Blood Purifiers and Nerve Restorers. It is especially valuable and eminently successful in building up run-down systems, it rejuvenates and revives the worn-out man and woman, by expelling the impurities of the blood and building up the nerve tissue.

It creates sound, healthy flesh, clears the complexion, and strengthens the nerves, aids digestion, is helpful in kidney diseases, and especially valuable in cases of female weakness and kindred ailments.

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MAGAZINES.

If any magazine in the world can be characterized as up-to-date, it's the American Monthly Review of Reviews. Take the March number, for example: The frontispiece is a portrait of the murdered Grand Duke Sergius of Russia. The principal contributed article is a graphic account of the most recent developments in Russia, entitled "The Doom of the Russian Autocracy," by Dr. E. J. Dillon, who wrote from St. Petersburg several days after the tragic events of Sunday, January 23, of which he was an eye-witness. Another important contribution to this month's Review is Prof. John Bassett Moore's exhaustive survey of the relations between the United States and Santo Domingo, which are just now under discussion in the Senate. Apropos of the inauguration on March 4, there are three articles on phases of the Roosevelt regime in Washington—"A Civic Awakening at the National Capital," by Max West; "The Civil Service Under Roosevelt," by William B. Shaw; and "The Postoffice: Its Facts and Its Possibilities," by R. R. Bowker. Mr. Walter Wellman's interesting story of "The Rise of La Follette" will attract wide attention, as will also Mr. Charles B. Cheney's rapid review of "Political Movements in the Northwest" (including especially those with which Governor La Follette has been identified). Mr. W. T. Stead contributes a characteristic study of the great revival in Wales. Mr. Alfred Gradewitz describes some recent types of lifeboats, and Mr. O. Leonard tells "What the People Read in the Balkans." In the editorial department, "The Progress of the World," the President's relations with the Senate, the railroad-rebate legislation, and other matters before Congress are fully discussed, while foreign affairs are treated with the Review's customary thoroughness.

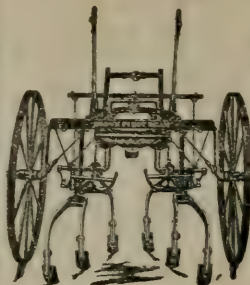
Important articles of timely interest, and a wealth of fiction, are noticeable in The Century Magazine for March.

How the Russian Gibraltar was cracked open by the Japanese, before the food supplies were nearly exhausted, is most interestingly explained by Richard Barry, an eye-witness, in "The New Siege Warfare at Port Arthur"; David Bell Macgowan, who will be remembered as the author of a recent article on "The Russian Lourdes," and last month of "The Conflict in Finland," now writes, with knowledge freshly obtained from representative Russians, of "The Outlook for Reform in Russia."

"A wonder-worker of Science," by William S. Harwood, is the first of two authoritative articles on the surprising achievements of Luther Burbank, the California producer of the thornless cactus and other plant novelties, which are shown pictorially.

The celebration in January of the centennial of the Philadelphia Academy of Fine Arts renders timely a profused illustrated paper by Harrison S.

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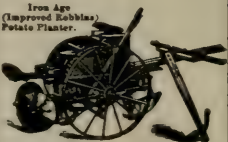
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Morris, describing that city's great contribution to American art; and Joseph Pennell, in a group of new etchings, shows how the "Skyscrapers of New York" impress an American artist who returns to find that the metropolis has been marvelously transformed during his absence in London.

Those who take an interest in the festivities attending the inauguration of President Roosevelt will be able to hark back to "The First Inauguration Ball," in which Gaillard Hunt pictures the memorable party that was presided over by Dolly Madison. Miniatures of that lady, and of President Madison, not before reproduced, accompany the article. A striking portrait of Mr. Roosevelt, taken during his visit to Glacier Point, Yosemite Valley, is also given.

Mrs. Kate Douglas Wiggin contributes the first part of an idyllic novelette called "Rose o' the River," the colored frontispiece of the magazine being George Wright's ideal of her heroine, a village belle; Alice Hegan Rice carries forward the fortunes of her new hero, "Sandy," and other stories are contributed by Maud Wilder Goodwin, Anne Warner, Anne Douglas Sedgwick, Caroline Abbot Stanley, L. Frank Tooker and Cloudestey Johns.

The March St. Nicholas is a fiction number, fiction that will please not only the girls and boys, but the grown-ups of the family as well. There are more chapters and colored pictures, of course, to carry on the fun and adventure of L. Frank Baum's "Queen Zixi of Ix." Then Agnes Louise Provost's "When the Ice Came Down" is a pleasantly seasonal story, and one to enthrall all ambitious lads. There is another of the delectable "Pinkey Perkins" stories, telling this time "How Pinkey Got Even. Every reader will laugh with Pinkey and rejoice over the success of his mischievous schemes. Belle Moses's "The Revenue Fund" is good reading for all the family; and "Swedie," by N. De Bertrand Lugin, is the fine story of a brave little Yukon hero. Read "Hominy Hot!" and then read Mary C. Dillon's altogether charming narrative of "Kalistia Wisefenow," and vote the March St. Nicholas rich in entertainment.

Of timely interest among the March St. Nicholas's sketches is Felicia Buttz Clark's "The Royal Family of Italy." In Charles H. Caffin's March chapters on "How to Study Pictures," he contrasts Franz Hals's "Portrait of a Woman" and Van Dyck's "Portrait of Marie Louise von Tassis," with interesting data of the two painters. Francis Arnold Collins's account of "A Wild-Animal Farm" gives extremely interesting glimpses of a circus behind the scenes. And Joseph H. Adams tells "The Practical Boy" how to make a lamp-screen, a fairy-lantern, a sign-board, candlesticks, and other objects useful and beautiful, in venetian and



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Florentine metal work. The illustrations, as usual, are a good part of these helpful articles.

Summary of other riches in the March St. Nicholas would be incomplete without mention at least of the number's many pictures, its jolly rhymes, and the departments of never-failing excellence. Nature and Science this month discusses how the lobster grows, the greedy cormorant, snow crystals, porcupines and salt, and other timely topics; and Books and Reading, the St. Nicholas League, the Puzzle Box, Letter Box, and Stamp Page are gratifyingly rich and alive.

Lippincott's Magazine for March opens with an admirable novelette from the pen of a United States Army officer, Captain Archibald W. Butt. It is entitled "Both Sides of the Snield" and is placed in the South at a period about thirty years after the war of the Secession.

Caroline Duer contributes one of the eight short stories in the number. This is enticingly called "A Wingless Victory." For subtle ingenuity it is a masterpiece. In honor of Ireland's patron saint, Vincent Harper's contribution is named "The Second Nocturn of St. Patrick," and it overflows with the wit which has made that country famous. Mrs. Israel Zangwill, under her maiden name, "E. Ayrton," writes a dear little story of an American boy abroad, and calls it U. S. A.

"The Dam at Mill No. 3," by Julia B. Foster, shows both strength and originality. A country-story by Louise Hardenbergh Adams is well called "A Home Provided." The number closes with a clever sketch of cowboy life called "Stag-Hound Bill," by Caroline Lockhart.

The contributors of verse are Clinton Scollard, Grace G. Bostwick, Katharine Lee Bates, James Westall Thompson, Carlotta Perry, Henry Hanby Hay, Aloysius Coll, Franklin P. Adams, Elizabeth R. Finley, and Elsie Casseigne King.

The pages of "Walnuts and Wine" are excellent.

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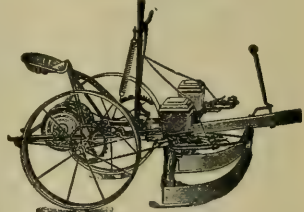
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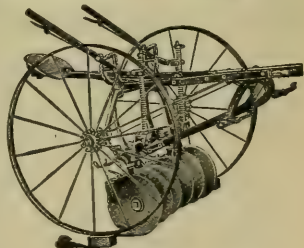
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REPORTS.

- U. S. Department of Agriculture, Washington, D. C. Report of the Editor for 1904, by Geo. William Hill.
- Circular No. 13. Standard of Purity for Food Products.
- Bureau of Plant Industry. Bulletin No. 72. Part II.
- Farmer's Bulletin, No. 212. The Cotton Boll Worm.
- Climate and Crop Service of the Weather Bureau. Virginia section. Department of the Interior, Philippine Bureau of Agriculture. Farmer's Bulletin No. 11: The Jute Industry.
- Farmer's Bulletin No. 12. Manila Hemp.
- Alabama Experiment Station, Auburn. Ala. Bulletin No. 130. Tests of Varieties of Cotton.
- Agricultural Experiment Station, University of California, Sacramento. 22d Report of the Station.
- Agricultural Experiment Station, Berkeley, Cal. Bulletin No. 162. Commercial Fertilizers.
- Illinois Experiment Station, Urbana. Circular No. 83. The Swine Industry from the Market Standpoint.
- Bulletin No. 96. The Testing of Corn for Seed.
- Bulletin No. 97. Market Classes and Grades of Swine.
- Kentucky Experiment Station, Lexington. Bulletin 78. Ginseng—its Nature and Culture.
- Bulletin 113. Protein—Content of the Wheat Kernel.
- Bulletin No. 114. Insects Injurious to Cabbage.
- Bulletin No. 115. Wheat—Field Test of Varieties.
- Bulletin No. 116. On Injury to Fruit by Insects and Birds; the Apple Tree Measuring Worm; the Fall Beauty, a New Apple.
- Maryland Experiment Station, College Park, Md. Bulletin No. 99. Spray Solution for San Jose Scale.
- Michigan State Agriculture College. Bulletin No. 221. The Care and Handling of Milk.
- Minnesota Experiment Station, St. Anthony Park. Bulletin No. 87. Potato at University Farm.
- Bulletin No. 88. Ninth Annual Report of the State Entomologist; Injurious Insects of 1904.
- Missouri State Horticultural Society. Report of Secretary for 1904.
- South Carolina Experiment Station, of Clemson College. Bulletin No. 93. Grasses and Forage Plants.
- Bulletin No. 94. Analysis of Commercial Fertilizer.
- South Dakota Experiment Station, Brookings. Department of Botany.
- University of Wyoming, Laramie. Fourteenth Annual Report of the Experiment Station.
- Texas Experiment Station, College Station, Texas. Bulletin No. 75. Cotton Investigation of the Bureau of Plant Industry, Department of

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Bulletin No. 76. Experiments in Steer Feeding.

Agricultural Department for the West Indies. Agricultural News. Conference Number of the W. Indies Bulletin.

Report of the National Association of Audubon Societies, by Wm. Dutcher, Chairman, New York city.

Kansas State Board of Agriculture, by F. D. Coburn, Secretary, Topeka, Kan. The Fourteenth Biennial Report of the Secretary, is a magnificent work, containing 1044 pages, with 175 illustrations. We shall probably give more space on this report in our next issue.

That's a rattling good offering of Berkshires made by The Woodside Farm on another page.

Bowmont Farms ad. should attract attention this month.

Poland Chinas of the right breeding and individuality are offered by Mr. W. B. Payne at prices which you can afford to pay.

Investigate the merits of the "Vest Pocket" Fertilizer advertised on page 217.

Prof. J. B. Weems is equipped to make analyses of minerals, feed stuffs, water, etc. See his ad.

Medicated Chicken Tarred Fabric advertised by the Westover Paper Co. strikes us as being a most desirable assistant in fighting lice in the poultry house.

W. M. Jones offers registered Poland Chinas at low prices. Look up his ad.

Gibson's Liquid Lice Killer ought to be in great demand at present. Try it at the manufacturer's risk.

If you can't find what you want advertised in this issue, kindly let us know what you do want.

ELECTRIC WHEEL CO.

Every farmer who has had the occasion to take hogs to market knows that it is not by any means an easy job to load them into the ordinary farm wagon. When hogs are ready for market they are fat, sluggish and not in condition to stand any amount of driving or handling. It's a mighty difficult task to handle a fat hog without injuring him. That is one of many reasons why it's a big job to load him into the hind end of a high wagon. It is not convenient or desirable to build a permanent loading chute for the reason that modern practice and efforts for the prevention of disease demand that the feeding lot shall be frequently changed.

It is not desirable or practicable to dig great trenches into which to back the great wheels of the wagon in order to get it down to the proper level. It is next to impossible to catch the hogs and force them up an incline plane into the wagon.

The writer of this article can re-

MUCH COTTON IN MISSISSIPPI.

Messrs. J. B. and B. A. Talbert, of Hardy Station, Miss., say:

"On two acres of land, in continuous cultivation for 60 years, we put one ton of Virginia-Carolina Fertilizer, and, notwithstanding drouth from March to July, we gathered cotton which ginned two bales weighing 500 lbs. each. This land, without fertilizing, usually made one bale on two acres, which clearly shows a good profit in favor of fertilizer."

PROSPERITY IN GEORGIA.

Messrs. S. B. & J. T. Trawick, of Linton, Ga., say:

"We have been using Virginia-Carolina Fertilizers for 6 years, with fine results. We began with a two-horse farm, using 200 pounds per acre. We now have 20 plows, and use from 500 to 1,000 pounds of the fertilizer per acre. Our experience is, the more fertilizer you use the greater the profit. We are well pleased with these goods. They give us entire satisfaction."

Increased Wealth of Florida Farmers.

Mr. J. W. Kimbrough, of the Kimbrough Hardware Co., of Webster, Fla., writes:

"We never, in our lives, had anything that gave us as much satisfaction and pleasure as the Virginia-Carolina Fertilizers. They have made us their friends, and have gotten our county in better condition, financially, than ever before in its history, and it is with the greatest pleasure that we recommend these fertilizers to the whole world."

Doubled Yield of Texas Cotton.

Mr. J. M. Little, of Henderson, Texas, says:

"I used Virginia-Carolina Fertilizers on my cotton, and they doubled the yield of my crop. I would not make another crop without the use of these fertilizers." Insist on your dealer furnishing your crops with Virginia-Carolina Fertilizers. You will be more prosperous. Write us for information.

VIRGINIA-CAROLINA CHEMICAL COMPANY

Richmond, Va. Atlanta, Ga.
Norfolk, Va. Savannah, Ga.
Durham, N. C. Montgomery, Ala.
Charleston, S. C. Memphis, Tenn.

CHARTERED 1870.

Merchants National Bank,

OF RICHMOND, VIRGINIA.

Capital,	-	-	-	-	-	\$200,000 00.
Surplus,	-	-	-	-	-	\$500,000 00.
Undivided Profits,	-	-	-	-	-	\$171,000 00.

Depository of the United States, State of Virginia, City of Richmond.

Being the largest depository for banks between Baltimore and New Orleans, we offer superior facilities for direct and quick collections. Accounts solicited.

JOHN P. BRANCH, Pres. JOHN K. BRANCH, Vice-Pres. JOHN W. GLENN, Cashier.
Assistant Cashiers: J. R. PERDUE, THOS. B. MCADAMS, GEO. H. KER-EE.

Three Per Cent. Interest Allowed in Savings Department.

FOR 5 HP GAS ENGINES

Grinds Ear Corn and Shuck Corn.

Capacity 12 to 18 bushels per hour. Safety Quick Release. 50 other sizes and styles of

Scientific Grinding Mills.

Sweep-gear, Combined and Power. Most efficient and economical mills on the market. Simple, strong and durable. Write for new catalogue C-5.

THE FOOS MFG. CO., (Established 25 years) Springfield, Ohio.

Highest Award, Gold Medal, St. Louis, 1904.



member vividly how, in the old days we boys delighted to assist in loading hogs. Many a stubborn fellow had to be elevated into the wagon with a rope about his hind legs. His ears were nearly pulled from his head in the operation. It made the hogs pretty hot and it did not improve father's disposition to any appreciable extent, but it was fun for we boys.

There is a better, easier, more humane way now and one which does not worry the hogs in the least. The first requirement is a low down handy wagon, a light incline plane well cleated, with stalled sides and a few light handles. The wagon may be driven into any feed lot anywhere and after the cleated incline is placed upon the rear end of the wagon and hogs may be gently directed to it with the handles. The operation is so easy and so natural that the hogs are literally loaded and the rack closed before they know it.

The low down wagon is so close to the ground to begin with that the incline is very gradual and easy. What has been said above as to the advantages of easy loading of the low down handy wagon does not apply to the loading of hogs only. It is the easiest and most convenient thing in the world for loading and hauling manure, corn fodder, hay, grain, stones, wood, logs, etc. The mention above was merely used as an apt illustration.

The Electric Wheel Company of Quincy, Ill., are the manufacturers of the Electric Low Down Handy Wagon, and Electric Steel Wheels. They will send you an illustrated catalogue if you ask them for it, which will fully describe these goods and prove to you their worth and advantage. Write for the book to-day.

THE "SPLIT HICKORY" VEHICLES.

The Ohio Carriage Manufacturing Company, of Cincinnati, have a very striking advertisement on another page of this issue. Hundreds of our readers are doubtless familiar with the split hickory vehicles made by this company because they own one. When Mr. H. C. Phelps, president of this concern, started out to sell first-class vehicles direct to the consumer at a very low price, hundreds of people prophesied for him a brief career in the buggy business. But these evil prophets were mistaken. Mr. Phelps thought that he could trust his vehicles with the average man on a free trial plan and by the time his advertisements were pretty well circulated the public responded with: "Send on your buggies."

The details of the success of this company, while very interesting, require a little more space than we can give at this time and we request that those who read this notice, look up the advertisement and write a postal card addressed to Station 294, Cincinnati, for a 1905 catalogue of Split Hickory vehicles and oak tanned har-

ness.

Seed House of the South.

RED CLOVER,
HAMMOTH CLOVER,
CRIMSON CLOVER,
WHITE CLOVER,
LUCERNE CLOVER,
ALSYKE CLOVER,
BOKHARA CLOVER,
JAPAN CLOVER,
BUR CLOVER,



TIMOTHY,
ORCHARD GRASS,
RED TOP or HERDS GRASS,
KENTUCKY BLUE GRASS,
RANDALL GRASS,
TALL MEADOW OAT GRASS,
JOHNSON GRASS,
GERMAN MILLET,
BUCKWHEAT,
OATS and
CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are

RAGLAND'S PEDIGREE TOBACCO SEEDS.

WE ALSO SELL

Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

Wm. A. Miller & Son,

1016 Main Street,
LYNCHBURG, VA.

Headquarters for Nursery Stock.

WHOLESALE
AND
RETAIL.

We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

Apples,	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

AGENTS WANTED.

FRANKLIN DAVIS NURSERY CO.,

Baltimore, Md.

NEWS ABOUT ST. PATRICK.

"The second nocturn of St. Patrick tells us that the howly man used to sit in ice-water ivery day long enough to read th' intire psalter; but the t'eologians mostly hold that if annywan doose not belave ut, or awnly belaves that he sat in th' ice-water twenty minues, or that the wather was timpered a little—the Latin woruds lavin' room fur honest doubt as to th' iexact timperachooore, d' ye see—thin, although, as ye say, the chances is ag'in' 'im, Howly Mother Church in her charity l'aves us the right to hope that he may be saved, in spite of his hitheridoxikil opinions."—Lippincott's.

..ELMWOOD NURSERIES..

—WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF—

APPLES, PEACHES, PEARs, CHERRIES, PLUMS, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

LOCK UP YOUR LETTERS



SECURE AS A BANK VAULT.
A LUXURY TO ANY ONE.
A NECESSITY TO EVERY ONE.

SAFE!!! PRIVATE!!!

THIS MAGNIFICENT DOUBLY REINFORCED

...Steel Safety Box... **FREE!**

STRONG LOCK, INTRICATE KEY, LARGE, ROOMY.

BRILLIANT BLACK, TRIMMED IN MAROON AND GOLD.

THE KIND BANKERS USE. CONTENTS SAFE AS A BURIED TREASURE.

HIDDEN FROM THE EYES OF ALL BUT THE RIGHTFUL OWNER.

THIS SPLENDID GIFT SENT PREPAID TO ANY ADDRESS.

Write us, and WE WILL TRUST YOU WITH 20 PACKAGES of Brauer's Ivory White Baby Cream to sell for us at 10c. each. When sold send us the money and WE WILL AT ONCE SEND YOU THE STEEL SAFETY BOX.

The Baby Cream sells on sight. Keeps children's skin in perfect condition. Cures every skin trouble. Gives instant relief. Elegantly perfumed. Delicately medicated. Antiseptic. Snow white. Ladies use it on themselves. It keeps their skin like velvet. No explaining to do. Circulars tell all about it.

WRITE AT ONCE AND EARN THIS ELEGANT STEEL SAFETY BOX. BRAUER CHEMICAL CO., 427 POSTAL BUILDING, NEW YORK.

PLANTERS

CARDWELL'S, EUREKA and CENTENNIAL FERTILIZER ATTACHMENT,
.... are the best, therefore they are the cheapest....

They Plant CORN, BEANS, ENSILAGE CROPS,
and distribute FERTILIZER any distance
apart, and any quantity.

We make THRESHERS, HORSE POWERS, PEANUT MACHINERY, STRAW CUTTERS, WELL FIXTURES, and all implements formerly made by H. M. SMITH & CO., and J. W. CARDWELL & CO.

THE CARDWELL MACHINE CO., Richmond, Va.

CLUBBING LIST.

In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

DAILIES.

	Alone.	With S. P.
Times-Dispatch, Richmond, Va.	\$5 00	\$5 00
Times-Dispatch (without Sunday)	3 00	3 00
News-Leader, Richmond, Va.	3 00	3 00
The Post, Washington, D. C.	6 00	6 00
The Sun, Baltimore, Md.	3 00	3 40

THRICE A WEEK.

The World, New York	1 00	1 25
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WEEKLIES.

Times-Dispatch, Richmond, Va.	1 00	1 25
Central Presbyterian, Richmond, Va.	2 00	2 25
Religious Herald, Richmond, Va.	2 00	2 25
Southern Churchman, Richmond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	2 00	1 75
Country Gentleman	1 50	1 75
Hoard's Dairyman	1 00	1 30
Horseman	3 00	3 00

SEMI-MONTHLY.

Kimball's Dairy Farmer	1 00	75
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MONTHLIES.

The Century	4 00	4 25
St. Nicholas	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's	3 00	3 25
Frank Leslie's	1 00	1 35
Cosmopolitan	1 00	1 35
Everybody's	1 00	1 35
Munsey	1 00	1 35
Strand	1 25	1 35
Madame	1 00	1 00
Argosy	1 00	1 35
Review of Reviews	2 50	2 75
Field and Stream	1 50	1 50
Woman's Home Companion	1 00	1 25
Poultry Success	1 00	75
Blooded Stock	50	60
Successful Farming	1 00	60
Southern Fruit Grower	50	85
World Markets and Sheep	50	75
Commercial Poultry	50	75

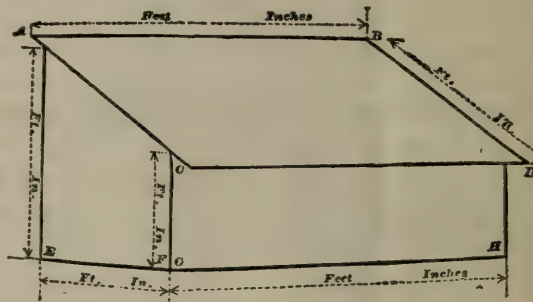
When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with Southern Planter."

We cannot under any circumstances furnish sample copies of other publications.

We will cheerfully quote our best price on any list of publications submitted to us.

ROOFING OF ALL KINDS.

Painted Corrugated Roofing, Painted V. Crimp Roofing, Roofing Tin in boxes or rolls, Tarred Roofing Felt, Perfected Granite Roofing.



Send us the DIMENSIONS OF YOUR ROOF, stating KIND OF ROOFING wanted, and we will quote you on sufficient quantity to cover it.

You can ADD YEARS to the life of your roof by painting it with our

Magnet Red Roofing Paint.

1 gallon will cover $2\frac{1}{2}$ squares. Can furnish in any size package, 1 gallon up. Only the very HIGHEST GRADE material enters into the manufacture of this paint. Write for prices.

We also carry a complete stock of Conductor Pipe and Gutter, Solders and Metals; Galvanized and Black Sheet Iron, etc.

Southern Railway Supply Company,
1323 East Main Street, RICHMOND, VIRGINIA

"Paints that Stay Painted."

PAINT is what you need. Do you know that
PAINT will preserve and improve your property?
PAINT will give your property a prosperous appearance!
PAINT will increase the value of your farm. We have
PAINT on hand for everything—
PAINT for roofs and barns. **LYTHITE COLD WATER**
PAINT Carriage and wagon PAINT. Our "Standard" house
PAINT is ready-mixed, and for the money no
PAINT can surpass it. Write us for
PAINT prices and color cards.

JOHN W. ATKINSON & CO.,
Richmond, Va.

LEE'S ==PREPARED== AGRICULTURAL LIME

For COTTON When used on land with a fair amount of vegetation or with COMPOST [which is better] the crops are as good as from any Fertilizer. It prevents RUST and SHEDDING, and keeps the plants green much longer in dry weather.

PEANUTS With the same conditions as above, it is a COMPLETE FERTILIZER for this CROP. Our customers say it is equal to the BEST FERTILIZERS ON THE MARKET.

DARK HEAVY TOBACCO Haul out your farm pen scrapings, plow under and broadcast 500 to 600 lbs. per acre [the earlier the better], and you will get a heavy crop of tobacco and a fine crop of Wheat and Clover or other grass, and by proper rotation will have a

rich lot for any crop.

BRIGHT TOBACCO Our customers say that 200 lbs. per acre in the drill with other Fertilizer will prevent the tobacco from FIRING and giving it a GOOD BODY and increase its value \$50 per acre. For Wheat, Oats, Clover and other grass it is exceptionally good.

LEE'S EXCELSIOR TOBACCO FERTILIZER, Specially adapted to dark shipping tobacco.

LEE'S HIGH-GRADE BONE and POTASH, special for Corn, Sweet Potatoes, all kinds of vegetables.

Lee's Special Corn Fertilizer for land devoid of vegetation, equal to any on the market.

PLAIN SHELL LIME
Constantly on Hand.

No. 1 BUILDING LIME, In car load lots direct from Kiln, LOWEST MARKET PRICE. →

✂ ✂ WRITE FOR CIRCULARS. ✂ ✂

A. S. LEE & SON, Richmond, Va.

The Power Behind the Style

In other words, Quality is what gives the customer real satisfaction and the dealer a trade he can look forward to. But in these days of so many imitations it is sometimes hard to tell the false from the true.

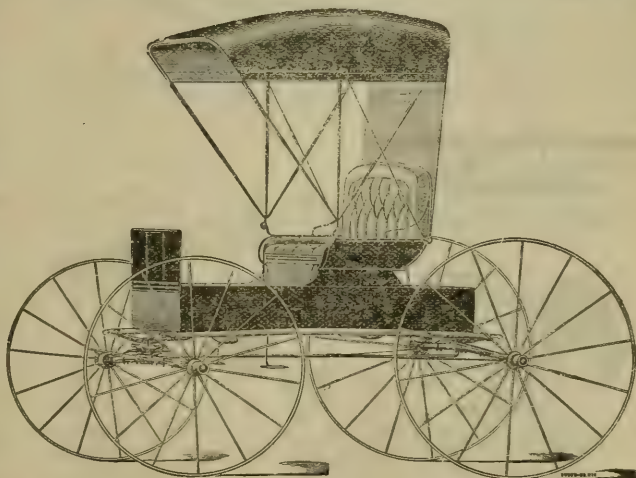
You know a little paint and varnish will cover a multitude of defects in construction, therefore when ordering vehicles it is well to look for a line with an honest reputation, and such is comprised of

VIRGINIA-MADE VEHICLES.

They contain "no hinge or loop to hang a doubt on."

They're true blue all through, and are priced to please the people and profit the dealer.

We've proved it to others - now about you.



RICHMOND BUGGY AND WAGON CO., 1433 E. Main Street, Richmond, Va.

W. G. ADAMS Sales Manager.

Leading 1905 Up-to-date Labor Saving Machinery A" Grade.



ROSS....

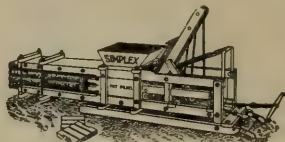
Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saws.



Rollers 6, 7 and 8 foot carried in stock.



Brown Steel Lever Harrows, Wood Harrows, Tiger Ball Bearing Disc Harrows, Spring Tooth Harrows, all sizes, Plain or with Levers, Acme Harrows, all sizes. Harrows of all styles kept in stock at lowest net prices.

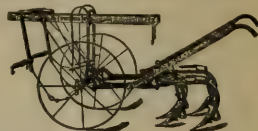


Simplex Little Giant Baling Press for Farmers' own use. Has large capacity. Write for prices and catalogue.



DON'T FORGET! All the merchants in town who claim to sell Oliver Chilled Plows and Repairs only sell the Imitation, Bogus, Cheap Goods. The only place in Richmond, Va., to buy Genuine Oliver Plows and Repairs is at 1436 and 1438 E. Main street.

Repairs carried for everything we sell.



Genuine BROWN Walking and Riding Cultivator. All styles. Write for circular and prices.



Aspinwall Potato Planter.

Automatic, Accurate and Reliable. Used by thousands of practical growers the world over. Over twenty years on the market. Don't be fooled by imitations and makeshifts, but write for attractive illustrated catalogue.

Buckeye Force Pumps, Porcelain Wood Pumps, IXL Steel Wind Mills, Frick and Autman and Taylor Engines, Saw Mills and Threshers.

Scientific Feed Grinders, all Styles and sizes. Write for Prices and Catalogue.



Tiger Double Row Corn Planter. Plants from two and a half to five feet. Plain or with Check Row Attachment. Also furnished with Fertilizer Attachment, if wanted.



ONE AND TWO-HORSE PLANTER, PLAIN OR WITH FERTILIZER ATTACHMENT.

Smith's EUREKA Corn Planters, FARMER'S FRIEND Plain and Fertilizer.

Wilson Bone and Feed Mills combined. All sizes from 4 to 40 horse power.

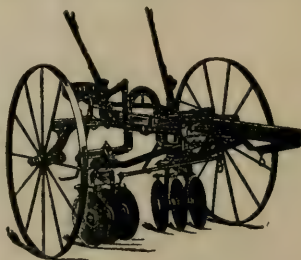


CAHOON SEED SOWER. MICHIGAN WHEELBARROW SOWER.



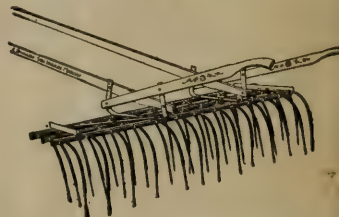
Kemp's Twentieth-Century Improved Manure Spreaders. Made in Three Sizes.

Write for special Catalogue and prices.



BEMENT DISC CULTIVATOR, with 6 or 8 DISCS

Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day. Write for circulars and testimonials.



Hallock Pat Tooth Weeders. "Bement" Improved Duplex Tooth Weeders. Studebaker and Brown Farm Wagons, Buggies, Spring Wagons, Carts and Log Trucks. All sizes.

HENING & NUCKOLS, Successors to CHAS. E. HUNTER, 1436-38 E. Main St., RICHMOND, VA.

The Southern Planter.

DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,
TRUCKING, LIVE STOCK AND THE FIRESIDE.

Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

66th Year.

Richmond, Va., April, 1905.

No. 4.

Farm Management.

WORK FOR THE MONTH.

At last we seem to have come to the end of the severest winter the South has experienced since the Government weather records have been kept. At the date of this writing (20th March) we have had nearly a week of spring-like weather, and for two days quite an abnormally high temperature. From the 20th November to the 10th March the cold has been continuous and severe, with more snow than for many years past. Thus for two winters in succession the South has had an experience never before recorded. The winter of 1903-'04 was followed by a crop season of great average production of the staples of the South. We trust that may be the experience this year. Whilst in the South we do not enjoy severe cold even in winter, as our conditions do not prepare us to meet it with comfort, as is the case in sections north and west, yet if the result is to be as was the case last year, good crop yields, we can learn to adapt our conditions with equanimity. One thing seems to be quite a settled fact—viz., that our winters are becoming longer and more severe, and our springs and falls, and especially our springs, much shorter. We pass now almost from winter into summer. Years ago corn was regularly planted in this State in March, and April planting was considered late. Now and for many years past little corn has been planted before May, and the bulk of the crop not until the end of May and into June, and we have known for the past two years of excellent crops of a quick-maturing variety made planted in July. This change in climatic conditions will have to be taken more into account by our farmers if they are to continue to make

the areas of crops which they ought to do. Whilst it is true that by the use of the improved machinery now in use a much greater area of land can be got into crops and be cultivated and harvested with the same amount of help than could have been done twenty years ago, yet the lateness of the spring now crowds a great part of this work into a few weeks, and unless better use is made of the fall and winter months in breaking and preparing the land than has been customary, a curtailment of area cropped must of necessity result.

The week or ten days of fine weather we had in the last half of March put the land into nice condition for plowing in all upland, but the lowlands are still too wet for the plow. These should be carefully watched, and as soon as the land is dry enough no time should be lost in getting them broken so as to conserve the moisture in the land. The long period of deficient rainfall, extending from early last fall to the month of March, has largely depleted the deep soil moisture, and this is going to have a prejudicial effect on all crop yields unless every care possible is taken to conserve what is left in the soil as the result of the melting of the snow. The only way to do this is to break the land as soon as it is fit to break and to harrow the surface as soon as plowed, and thus cover it with a soil mulch. Where land cannot be plowed, and it is drying out fast, run a disc harrow over it, or a heavy drag harrow, to break the crust and stop the escape of the moisture. Whilst we are thus emphatic as to conservation of the moisture, we do not want to see farmers make the mistake of plowing the

land too soon. Land plowed wet is land ruined not only for one year but probably for several years. Wet clods turned under will remain clods incapable of giving up their plant food to the crop all the season, however much the land be worked. A good test as to the fitness of the land for plowing is to take a handful of the freshly turned up soil and squeeze into a ball in the hand. Drop this ball on the ground. If it remains a ball the land is too wet to plow; if it breaks into pieces, the land may be plowed. When once the land is fit for plowing, keep the teams at work plowing and harrowing the land, and thus admit the air and sun into it to warm it up and fit it for the seed. It is too late now to turn the subsoil on to the surface, but not too late to break this subsoil. Let this be done as far as possible on all land to be cropped. Use either the subsoil plow or a single-tooth cultivator, and thus increase the depth of soil and make it capable of storing water for the needs of the crop. The importance of this depth of soil for the welfare of the corn crop, and, indeed, for all crops, is not half appreciated as it ought to be. No great yield of corn was ever made on soil that had not been deeply broken.

Do not waste time at this late period in seeding Spring oats, except in the mountain sections of the Southern States. Oats seeded after March are rarely worth the trouble of cutting. Far better give the time to the preparation of the land for and the seeding of the corn and cotton crops—which are practically certain crops—and let forage crops planted after the corn crop is in the ground take the place of the oat crop. More and better feed for the stock can be made from cowpeas, soy beans, sorghum, peas, kafir corn and millet, and in the more Southern States teocinte, than can be made from an oat crop. All these are especially crops adapted to our Southern climate, which the spring oat crop is not. They will make heavy yields, and the harvesting of them comes at a time when they do not interfere with the harvesting of the fall-sown crops or the saving of the hay crops. Besides being valuable as hay crops, sorghum and kafir corn make excellent feed for stock fed green, and come in at a time when pastures are suffering from the hot weather, and thus help to tide over the period of the year when stock are apt to need feeding to keep up the supply of milk and the growth of the animals.

The work of preparing the land for the corn crop and for the cotton crop and the planting of the latter crop should have constant attention this month. In our last issue we said something about the prepara-

tion and fertilizing of the land for the cotton crop, and to this we refer our readers. We urge strongly on the cotton planters that they do not plant cotton to the exclusion of corn and other crops which are necessary to make life on the plantation happy and comfortable. Whilst it is clear that the demand of the world for cotton is constantly on the increase, and that it is capable now of using a crop of 11,000,000 bales per year, which it will take at a price profitable to the producer, especially if he will so prepare his land as to produce at least a bale to the acre, and he can easily do this, and should do as much more, yet it will never pay the cotton planter to produce cotton wherewith to buy the necessary home supplies of the farm. Curtail the area in cotton, but produce all possible to the acre. Two bales to the acre cost no more to produce than half a bale to the acre, except in the item of picking. The same plowing and cultivating will produce the larger quantity as the smaller when once the land has been gotten into a proper condition of fertility, and this largely depends on the following of a proper rotation in the production. What all our cotton lands most need is vegetable matter in the soil, and this can be supplied by growing cowpeas and crimson clover every year on the land. Every acre planted in cotton should each winter be covered with a crop of crimson clover, and one year in three ought to have a cowpea crop grown during the summer to be cut for hay except in the first year, when it ought to be turned under after the vines have begun to die down. When cutting for hay do not cut close to the ground, but leave a heavy stubble to turn under, and follow with crimson clover to grow during the winter. Give the cowpeas and clover 200 or 300 pounds of acid phosphate to the acre, and thus secure a heavy growth of vines and clover, and then the cotton will need but little help in the way of fertilizer to make the crop. When a bale to the acre is made by this system, and it can easily be done, then the cost of cotton will be reduced far below the price at which it will sell, even if a 12,000,000 bale crop be produced. When the crop is produced in this way, and has not a heavy fertilizer bill tagged to it, then the planter can hold it until the price suits him without inconvenience.

In our last issue and this one will be found a number of reports from subscribers on the crop of corn produced last year. A careful study of these will show that in every case the heavy yield was made by deep and perfect preparation of the soil before the planting of the seed. It is an undeniable fact that the success of the corn crop depends more upon per-

fect and deep preparation of the soil before planting than upon any fertilizer which may be used. Corn is a deep and wide rooting plant, and will forage over the whole field for the necessary plant food to make its growth, if only the soil is finely and deeply broken. There is no possibility of making a heavy yield without much closer planting than is customary in the South, and this closer planting cannot be made to grow upon the land and make corn unless each plant has depth of soil in which to root, and this deep soil is finely broken and well filled with vegetable matter. Land that will not make corn when planted in rows 3 feet 6 inches apart and 18 inches apart in the row, ought not to be put into corn, but should grow cow-peas and crimson clover until it will make corn planted the above distance apart. The use of commercial fertilizer of any kind on the corn crop is rarely profitable. It will increase the yield if adapted to the needs of the soil, but such increased yield will rarely pay for the cost of the fertilizer. Farm yard manure is the only fertilizer which can be applied with a certainty of an increased yield made profitably. This has been the almost universal result of experiments made not only throughout the South, but throughout the whole country. Corn can avail itself of the coarser and more crude plant food in farm yard manure better than other crops, and whilst this manure lacks phosphoric acid to meet the needs of the crop, yet if the soil be deeply and finely broken and has had a dressing of lime at the rate of 25 bushels to 50 bushels to the acre applied during the winter or early spring, the corn will get all it requires to make the crop a success. Corn is a great consumer of nitrogen in its growth, but as this growth is made during the hottest season of the year, when nitrification is most active in the soil, and as it is now an admitted fact that corn, like the legumes, can get nitrogen from the atmosphere by means of bacterial action in the soil, the application of farm yard manure conduces to the filling of the soil with the necessary bacteria, and hence results in successful corn production. The crop is also a large consumer of potash, but except upon limestone soils it rarely pays to apply potash. The use of lime renders the potash in our soils available, and is much cheaper than to apply potash. Wherever possible select sod land, or land that has grown a pea or crimson clover crop, for the corn crop, and then with deep and perfect preparation of the land a crop in excess of the average for the State can be secured. This average of about 20 bushels to the acre is one that reflects seriously on the ability of our farmers. No such crop can be grown profitably. Without allowing anything for the rent

of the land, a corn crop will cost at least \$8 per acre to produce, and therefore a 20-bushel crop at the average price will leave nothing for rent or labor. At least 50 bushels to the acre should be made, and this can be done with ease, even upon our uplands, when they are well filled with vegetable matter and deeply and finely broken, whilst upon our river low-grounds 75 to 100 bushels per acre can readily be made, and half as much more per acre has been made on these lands in a number of cases we have reported. If on account of poverty of the land a fertilizer must be used to make any crop, then we are strongly of opinion that 300 to 500 pounds to the acre of acid phosphate is the fertilizer likeliest to make the crop. Numerous experiments made in this State and elsewhere have demonstrated that phosphoric acid is the dominant factor in the production of the corn crop, and that given this in abundance the robust growth of the crop and its great root system will enable it to search out and secure the other plant food needed. On the thin sandy lands of the eastern section of this State and North Carolina, cotton-seed meal has been used with advantage in conjunction with acid phosphate. Where more than 200 pounds to the acre of any fertilizer is applied it should be spread broadcast over the field and be well mixed with the soil before the seed is planted. The question of the seed to be planted is a matter which is now receiving more attention in the great corn-growing States than ever before in the past. Experiments have clearly demonstrated that carefully selected seed, with a high germinative capacity, and taken from crops from which all barren stalks have been carefully culled before pollenization has taken place will largely add to the yield of the crop, and every farmer ought to see to it that he secures at least some of this selected seed from which to grow seed for another year. This seed should be planted away from the other cornfields, so that cross pollenization may not take place, and from the crop so raised the best and most to be desired type of ears should be selected in the field before the crop is cut, and be carefully cured and saved for seed. Much may be done with the general crop by carefully testing the seed for germinative power before planting. Select the type of ears desired, and take from each cob a few grains from the top, middle and bottom and test them by putting between damp flannel in a snueer kept in a warm place for a few days. The number of seeds which sprout quickly will determine whether the seed can be safely sown with a certainty of making a perfect stand if the soil and season are right. Very much of the small yield secured in the average crop is the result of missing hills and barren

stalks. The missing hills can be obviated by testing for germination before planting, and the barren stalks can be got rid of by cutting out all barren stalks before the tassel forms, or at least before the pollen on them blooms out and commences to fall. Cross pollinization by planting some seed of a highly prolific variety along with the ordinary crop and careful selection of the best type of ears from this crop may result in adding greatly to the yield of the crop, but all such experiments require time and careful study of varieties and adaptability to local conditions. Do not be in too great haste to plant. Let the ground become warm first. Corn planted in cold soil never germinates freely, and always fails to grow off robustly, and the crop that suffers in this way rarely makes a good yield. Corn should grow from start to maturity without a check if it is to make the best yield. Use care in planting to have the rows perfectly straight and the seed put in to a uniform depth, and then the crop can be cultivated by machines and the cost of hoeing be saved. Hand labor is now too costly to use for cultivating the corn crop, and it is absolutely unnecessary to use it with the perfect cultivators we now have if proper care be taken in planting the crop.

The preparation of the land for the tobacco crop should have attention. The importance of fine preparation of the soil for this crop is usually fully realized by growers, as in its absence no success can be looked for. Tobacco is a plant with a small root system, and must have its food supplied in such form as to be readily available and within a small area of the plant itself, where the fine and delicate rootlets can appropriate it without having far to search for it. It is important that the land should be capable of holding moisture and yet be able to get rid quickly of excessive wet, which is fatal to the crop. These conditions can only be met by a deep soil well filled with vegetable matter and finely broken. The land should be plowed, harrowed and replowed and harrowed, and the roller or plank drag be used frequently to get rid of all clods and make the soil fine and yet compact. The question of the fertilization of the crop is one causing constant enquiry from growers. The requirement of the different sections are very various, and analysis of the plants go to show the most diverse appropriation of the different elements of plant food; hence it is a very difficult question upon which to advise. The small bright tobacco of the Southern counties of this State and North Carolina seems to call for very little fertilizer, but that must be in a very available form. Wherever the fertilizer

is in excess this type is very apt to grow coarse and cure up a poor color. Cotton-seed meal seems to meet the requirement of this type in the way of nitrogen quite well, especially if supplemented with a little nitrate of soda to give the plants a start. Very little phosphoric acid is needed, and the potash should be supplied by sulphate of potash. The dark, heavy shipping types of tobacco call for heavy fertilization with nitrogen and potash and a small percentage of phosphoric acid. A fertilizer having 4 or 5 per cent. of nitrogen, 15 to 16 per cent. of potash and 3 to 4 per cent. of phosphoric acid has been found to give good results when applied at the rate of 400 pounds to the acre. The nitrogen should be provided by nitrate of soda and dried blood, the potash by sulphate of potash and the phosphoric acid by acid phosphate. A mixture made up of 100 pounds of dried blood and 60 pounds of nitrate of soda, 120 pounds of sulphate of potash and 120 pounds of acid phosphate to the acre should give good results on land well supplied with humus and in a good physical condition. The highest grade Peruvian guano now being imported into this country, and which will be found advertised in our columns, should give good results on dark, heavy shipping tobacco, when supplemented with some sulphate of potash. It is largely used in the island of Cuba by tobacco planters, and old planters who used it 30 or 40 years ago when it was formerly to be had in this country have frequently told us that since they were unable to get this guano they could never make the quantity or quality of tobacco they formerly made with its use. We should certainly advise a trial of this fertilizer, say at the rate of from 500 to 750 pounds to the acre, with 50 pounds of sulphate of potash.

Whilst it is yet too early to sow the main crop of forage for the stock, yet if likely to run short of feed after crimson clover and grain crops sown for feed have been consumed, it would be well to prepare a piece of land finely and sow with cat-tail millet (called *Pencillaria* in some of the seed catalogues). This, if the land be in a good state of fertility, or if it be helped by some acid phosphate applied before seeding, and a top dressing of 100 pounds of nitrate of soda per acre after the crop has commenced to grow, will make a heavy crop of green feed to cut for feeding, and what is not used in this way will make good hay.

COW PEAS.

We are repeatedly asked what is the best variety of Cow pea to grow. We have been in communication

for some time with a gentleman who for twenty years has been experimenting with eight different varieties. He says that as the result of these experiments he has no hesitation in saying that for improving the land, to be turned in after the pods have begun to ripen, the Whippoorwill is the best. For a hay crop the New Era, planted on fairly good land, or on land that has been fertilized, is the best. The experiments were made in Middle Virginia.

CORN GROWING ON JAMES RIVER BOTTOMS.

As showing the wonderful inherent fertility of these lands, and their special adaptability to the production of the corn crop, a subscriber, Mr. J. E. Garrett, of Powhatan county, tells us that last year he planted an eight-acre field of river lowground, which has grown corn continuously for thirty years without manure or fertilizer of any kind, with White Dent corn, and made a crop of ninety bushels of shelled corn to the acre. The land was plowed as deep as two heavy horses could plow it, and was then put into fine order with the disk harrow and float. The corn was planted with a check-row planter, 3½x3 feet, and was left 2 stalks to the hill. The cultivation was level and shallow.

SOY BEANS.

Editor Southern Planter:

I have been rather surprised at Mr. Ruffin's conclusion as to the effect of growing soy beans on the land in his section. Now this is a matter of great interest to us all, and Mr. Ruffin being, as I believe, far above the average authority on such subjects, I fear his remarks may deter many from growing this crop. Undoubtedly it is a valuable forage crop. It should also be one of the finest nitrogen gatherers—judging from the number and size of tubercles on the roots. Most likely the peas grown next the soy beans were black, or some other variety, that sheds a heavy deposit of leaves on the land when cut for hay, and thus enables it to make a fine showing on the following wheat crop, in sharp contrast to that on the land where the soy beans left it perfectly bare when the crop was harvested.

Now does growing of soy beans on land before wheat fail to help the wheat, or does it help it less than black peas? We know in this locality that where a piece of land is seeded one-half to black and the other half to shiny peas, and both harvested for hay, wheat shows up better on the half where the black

peas were grown, but not enough better to pay for the difference in hay on the two pieces. Was the wheat on the land Mr. Ruffin speaks of enough better on the pea land to pay for the difference between the pea hay and the soy bean hay? Let us have all the light possible on this subject. A. C. FISHER.

Richmond Co., Va.

THE DECADENCE OF CLOVER—AN INCREASING CALAMITY—IS THERE NO REMEDY?

Editor Southern Planter:

"For everything there is a reason and a cause," and the increasing difficulty in raising good crops of clover should be diligently sought after until found. The clover crop in this country is of too much importance for farmers to easily dispense with it. The SOUTHERN PLANTER truly says: "The value of the red clover crop as an improver of the land, as green feed and as a hay crop, is so great that farmers cannot afford to allow its seeding to cease unless it is absolutely certain that by no means can its growth be ensured."

The principal and most fatal enemy of the clover plant is "clover sickness," known and dreaded in Europe long before its appearance in America. The destruction of Mr. Dulany's 70 acres of clover was probably a case of clover sickness instead of winter killing. A magnificent stand of clover in November is not likely to be destroyed by winter killing. Here in Pennsylvania I have found some plants pushed out of the ground by freezing and thawing, and also wheat plants, but never saw all the clover plants heaved out of the ground.

W. T. Thornton, a well-informed English writer on agricultural topics, says of clover sickness: "Except on certain rich, calcareous clay soils it (red clover) has now however become an exceedingly precarious crop. The seed when genuine, which unfortunately is very often not the case, germinates as freely as ever, and no greater difficulty than heretofore is experienced in having a full plant during autumn and the greater part of winter, but over most of the country the farmer, after having his hopes raised by seeing a thick covering of vigorous-looking clover plants over his field, finds to his dismay by March or April that they have either entirely disappeared, or are found only in capricious patches here and there over the field. No satisfactory explanation of this clover failure has been given, nor any certain remedy of a kind to be applied to the soil discovered. One important fact is, however, now well established—viz., that when the cropping of the land is

so managed that clover does not recur at shorter intervals than eight years, it grows with much of its pristine vigor. The knowledge of this fact now determines many farmers in varying their rotation so as to secure this important end."

The Library of Universal Knowledge (which is really Roberts' Encyclopedia) says of red clover: "In America it grows well on sandy loams, though sown alternately every other year on the same land; But in Britain the land is thought to become "clover sick" when sown too frequently with this crop. An interval of not less than eight years is thought advisable." The Century Dictionary says that land is said to be "clover sick" when in bad condition from being too long used for raising clover.

Some land is supposed to be clover sick when there is nothing the matter except the exhaustion of fertility by continued cropping with clover and grain without the application of stable manure. Clover, which the clover enthusiasts depend upon to supply the fertility removed by grain crops, obtains only one of its constituents from the atmosphere; the others (just as essential to its growth) must be taken from the soil. When these become scanty the growth will become feeble, or not at all. If land is kept well manured with the dung of animals, there will not be much need of inoculation with the microbes to form the tubercles on the clover roots, through which the plant obtains its nitrogen from the air. If the microbes do not live in the manure, they (like the flies in the horse stable) find it a good place to breed in. The writer has never failed of obtaining an excellent crop of clover and wheat on a field well prepared and top dressed with fine manure.

In the parable of the sower, in the New Testament, the seed that fell among stones and thorns failed to produce anything at harvest. It is equally true that seed—clover seed especially—when sown among lumps and clods is as badly treated as if sown among stones and thorns.

Prof. Roberts says: "The failure to secure good seedlings of clover during the past few years is, in my opinion, mainly due to one or more of three causes—first, a lack of moisture, due to two unusually dry summers." He might with safety have gone still farther and said that the failure to obtain a good stand of clover in any year is usually caused by dry weather coming on just after the seed has sprouted, with no roots long enough to reach the moisture a few inches beneath the surface, and consequently the little plants perish from thirst. The longer-rooted wheat, rye or oats, which occupy the ground with it, grow right along without showing many signs of suffering.

I have examined my wheat fields after seeding with clover, and been rejoiced, to find that every seed had germinated. The plants everywhere stood thickly and appeared vigorous. At the next examination, if the weather had been continuously dry, the little plants looked sickly and the leaves were beginning to wither. At harvest all were dead except where the seed had rolled into cracks, and, standing nearer moisture, had maintained an existence.

Prof. L. A. Clinton advises to wait until the ground is dry enough to work and then sow the clover seed and harrow it in with a slant-tooth harrow. I have tried this way and not only obtained a good growth of clover, but the harrowing appeared to be of much benefit to the wheat on the ground by breaking the crust, letting in the air and sun and probably starting capillary action.

If I wanted to increase the chances of securing a good field of clover I would do as the SOUTHERN PLANTER advises—give the ground a good preparation, sow the seed, harrow it in, and let the clover have full possession of the ground. There is really no fairness in sowing clover among wheat, rye or oat plants that have already attained considerable growth and make it struggle for existence with its older and taller rivals. It is a wonder that clover should do so well as it does, robbed of fertility and smothered by the "nurse crop" until after harvest.

Prof. Roberts says: "Some failures without doubt have been due to lack of humus in the soil." I am quite sure that a *great many* of them are. On newly-cleared wood land, where the humus is plentiful, we never hear of a failure to obtain a good clover crop. Potash improves the land for clover, and the ashes of the wood burned on the newly-cleared ground helps the clover.

I believe the SOUTHERN PLANTER is correct in the opinion that the use of lime would largely conduce to the growth of clover in Virginia and throughout the South generally. Lime not only corrects the acidity of the soil and makes the latent fertility available, but is a valuable manure itself, lime being one of the necessary constituents of a good soil.

Bedford Co., Penna.

J. W. INGHAM.

ALFALFA IS KING.

Editor Southern Planter:

A successful advertiser has said that "keeping everlastingly at it brings success." His own success proves the truth of his saying.

The SOUTHERN PLANTER has been pounding away at its readers now for a whole year or more advocating

raising alfalfa. Every alfalfa field grown in response to its untiring effort will be a monument to its usefulness. Were every farmer in the South Atlantic States a subscriber to the SOUTHERN PLANTER there would be fewer poor farmers.

The SOUTHERN PLANTER has told its readers that alfalfa will grow on warm, well-drained soil. It will grow even on stiff, red clay, but not on very thin sand.

It has been advocated to subsoil before seeding a field to alfalfa. It is a good thing to do, yet if you cannot afford to subsoil, do not let that prevent you from sowing alfalfa, for its strong roots will penetrate the hardest clay and will occasionally go down to a depth of over a hundred feet.

The land should be free of weeds. A crop of peas sowed this spring and either harvested or plowed under will put the land in excellent condition for alfalfa. (Better cut in the peas or pea stubble with a disk harrow than plow the land. Plowing brings up the weed seeds from below to ruin the alfalfa crop.—ED.)

The land should never be plowed shortly before sowing the alfalfa seed. Plow at least four to six weeks previous to seeding. Then keep on working the field every week, or, still better, twice every week with the disk harrow or spring-tooth harrow and coulters until the last week in August or first week in September.

Alfalfa needs lime. Spread from 20 to 50 bushels per acre. Without lime alfalfa will rarely ever do well. Lime can be had at about \$3 per ton delivered.

Alfalfa needs phosphorus. The cheapest way to buy it is in "floats"—that is, untreated rock phosphate. It should be had at from \$9 to \$10 per ton delivered. Floats contain twice as much phosphorus as the so-called "acid phosphate" or common phosphate fertilizer. Floats, however, dissolve slowly, and the first year some prepared phosphate fertilizer must be used—say from 300 to 500 pounds per acre, and in addition from 500 to 2,000 pounds of floats. The more the better.

Alfalfa also needs potassium (erroneously yet commonly called "potash"). A hundred pounds per acre of a fertilizer rich in potassium (muriate or sulphate of potash is best) are needed.

The Department of Agriculture warns against the use of stable manure on an alfalfa field, because it carries seeds of weeds. Furthermore, alfalfa does not need a fertilizer containing nitrogen or "ammonia."

Of course, your seed or your land must be infected with alfalfa bacteria. It would be a foolish waste of money to sow alfalfa without providing the bacteria

that enables the plant to draw the nitrogen out of the air. If your soil is very rich in nitrogen, then alfalfa may succeed without the bacteria. By the way, when land is abundantly supplied with nitrogen the bacteria become lazy and "go on a strike," so that the plant must take its supply from the soil instead of from the air, and this soon exhausts the soil nitrogen and then the alfalfa dies out. The bacteria work best when they are hungry.

The SOUTHERN PLANTER has repeatedly stated that lime and fertilizers may be spread on the same field, but should not be sown at the same time. Spread the lime while you are preparing the field with the disk, and the fertilizer when sowing the seed.

Alfalfa seeded late in August or early in September should make a good growth before winter. The following spring and summer the field should be mowed every few weeks to kill or keep down the weeds and cause the alfalfa to stool out. The oftener alfalfa is mowed the better it will grow. Do not cut it too low. Do not pasture. You should not look for any crop to mow for hay the first year.

Alfalfa draws heavily upon the supply of lime, phosphorus and potassium in the soil, and these elements should be supplied every year. If your alfalfa field yields you every year three to five cuttings of a ton or more every time, you will not mind spending a little money for a few hundred pounds of fertilizer every year. The more fertilizer the more hay.

Alfalfa fields can be made to last a generation and longer if properly worked. After the first year, if the field is dry and hard in the spring, run the disk harrow over it and level again with the smoothing harrow crossways. Of course, disk harrows must always be worked in half-lap, else the field will be ridged.

After every cutting the field should again be disked. The object of frequent disking is to prevent the growth of broom-sedge and other obnoxious weeds, to expose the insects and insect eggs to the weather and to split the top roots of the alfalfa to make it stool out better. The first time the field is disked the disks should be set rather straight, but the following year and ever after the disks should be set so as to tear the whole surface of the field as if you meant to kill every bit of vegetation. It should look almost as if it had been plowed and harrowed. (We doubt the advisability in the South of disking more than once each year.—ED.)

When poorly fertilized and not properly cultivated, alfalfa will not last long, but will soon give way to weeds and that pestiferous broom-sedge.

The Southern farmer who has half or more of his

entire farm in alfalfa has indeed a valuable possession. Start this year. Now is the time to get the land ready for fall seeding. Alfalfa, when once well set, requires less work and is far more profitable than corn. It has been known to yield over ten tons of hay per acre. It will make the land and its owner rich.

If alfalfa is to be grown in rotation with other crops, it should be left to occupy the field from four to six years. All crops grow splendidly after alfalfa. The alfalfa field should be broken in July and sown to wheat in the fall. If plowed too late, the soil would be loose and dry out too much when the wheat is sown. The usual rotation in some irrigated districts in Colorado is 1. 2. 3. 4 alfalfa. 5 potatoes, 6 grain. 7 corn. 8 grain and then again alfalfa. Others have one-third of the land in alfalfa.

In the South Atlantic States alfalfa should be sown in the fall without a nurse crop, except in the mountain sections, where spring seeding without a grain crop is best.

N.

ALFALFA GROWING IN VIRGINIA.

Editor Southern Planter:

For the past two years the Experiment Station has been conducting experiments and collecting data for the purpose of giving some definite information to farmers of the State who are interested in growing alfalfa. Wherever alfalfa has been grown successfully it has shown itself to be one of the most profitable of leguminous plants, not only so from the large amount of forage it produces, but also as a soil renovator.

The questions most often asked are, "In what portions of the State can alfalfa be grown, and how can a stand be secured?" Although our experiments are not yet complete, we have sufficient material in hand to answer these questions, which will be of interest to those who contemplate sowing alfalfa this spring.

A reference to letters on file at the Station will show that it is being grown successfully in every section of the State.

In order to secure a stand the most important step is a thoroughly prepared seed-bed, lining and fertilizing where needed and using good seed. Lining should not be omitted if the land is inclined to be acid. A liberal application of stable manure, bone meal or acid phosphate at the rate of three or four hundred pounds per acre will, in most cases, be beneficial. Our experiments show that phosphoric acid in the form of *basic slag* gives better results than phosphate rock.

All experiments seem to indicate that seed or soil inoculation is necessary in order to insure a reasonable chance of success at the first trial. Certainly alfalfa bacteria must be present if the plant is to live and thrive. Several of the gentlemen, who now have fine fields of it, state that they failed a number of times, securing after each seeding only a few plants, but by plowing and reseeding the same plot year after year they finally succeeded in getting a stand of vigorous plants, all bearing nodules on the roots.

As to inoculating material, we believe one of the best, and one which has given us perfect results, to be soil from an old alfalfa lot where the roots have a good nodule formation. At seeding time spread from one to two hundred pounds per acre of this soil over the land and harrow in with the seed. We have also obtained good results by using it as a top dressing several weeks later. Soil from sweet clover (*Mellilotus*) lots will give equally as good results. The Department of Agriculture at Washington is sending out pure cultures of alfalfa bacteria which has met with good success. The National Nitro-Culture Company of Westchester, Pa., is advertising very extensively a preparation which they term "Nitro-Culture." This, if properly prepared, should also be a good inoculating material. However, the price—two dollars for sufficient quantity to inoculate one acre—charged by the National Nitro-Culture Company is very excessive. In order to protect the farmers of Virginia from having to pay this enormous price, the Experiment Station at Blacksburg is preparing for distribution this spring pure cultures of alfalfa bacteria. There being no funds available for this purpose, a charge of twenty-five cents for sufficient quantity to inoculate an acre will be made, which is about the actual cost of manufacturing, packing and mailing.

MEADE FERGUSON.

Virginia Experiment Station. Bacteriologist.

HAY PRODUCTION.

(Extract from an Address Made by Mr. Clark, the Noted Hay Grower of Higganum, Ct.)

I am here to talk about grass culture, not that I can tell you much that I have not told to you or others heretofore, except that I can confirm my previous statements about the success of grass for hay as a money maker without the aid of yard or coarse manures for one more year. I am here to talk about some of the things that I feel sure of; also some facts that have been found through scientific research. It is an age of progress. I am here to tell you a few

facts that a farmer boy has found while working upon an abandoned New England farm in grass culture. One of the important things found out is that we can make money on the farm. Sixty years ago this spring I sowed a field to oats and timothy, used three bushels of oats to the acre and three pecks of timothy, and when the oats were cut the timothy all died. In September I seeded it again to timothy and rye; rye was all right. Twenty-three months later cut a poor stand of timothy; now I get a good stand of grass in ten months. My next experience was in turning sod over flat September 1st, then harrowing and seeding timothy. Tried that several times, found the new grass came up all right, but in the spring old grass came up and killed all the new grass out; also found that old sod caused a premature drought. I will now tell you how to make money in grass culture and also how to make money on the farm. Intensive cultivation is the watchword. For eighteen years or more I have been experimenting on many different kinds of grasses. My first fear was that no commercial compound that was on the market could produce the favorable continuous results of our yard or coarse manures; that no commercial fertilizers would continue to produce a continuously large crop. My fear had been strengthened by the use of Peruvian Guano and other compounds years gone by. While that kind of fertilizer may be of service, my experiments in our soil have proved them to be a failure with the old-style cultivation, as well as all other compounds that I had then tried. But later I found that by the use of bone, potash and nitrate of soda, or their equivalent, with the new method of intense cultivation I could maintain a continuous high crop standard, and I am here to tell you of another year of my continued success.

This year's crop is fully up to any previous year, and you must bear in mind my field to start with was one of the poorest of the poor; the surface was half covered with rocks, with a filling composed of ferns, white birch bushes, hardhack, juniper bushes, sumac and a large variety of other foul vegetation. Then to complete the difficulty all was covered with a dense covering of moss. It can be truly said of that sixteen-acre field that it was a rock-bound, moss-bound, brush-bound abandoned New England farm. I have a section now left to show. I know of no poorer farm. When the rocks were removed the surface, in sections, was composed of clay gravel hard-pan, gravel hard-pan with a slight amount of loam and gravel with a little loam.

The clay gravel hard-pan and clay hard-pan holds water well. The balance, about two-thirds of the

field, the water supply is poor. I refer to the subsoil water, which on that and all similar land cannot be supplied except by intense cultivation.

I had to remove at least a thousand tons of rocks to the acre before I could commence to plow. The cost of removing these rocks and bushes from the sixteen-acre field was \$4,750. One corner of this field is 125 feet higher than the other. This sixteen-acre field, poor, hillside, rocky and bushy, did not produce, to start with, two hundred pounds of vegetable substance of every kind to the acre per year. This year 11 1-8 acres of the same field produced over 175,000 pounds of well-dried hay—more than 87 tons. At \$15 per ton, which is below the present price of hay in that section, it would bring over \$1,300. The hay cost me at the barn less than \$5 per ton, making net profit of \$800 or \$75 net profit per acre above all costs. With these facts in hand, who will say that we cannot make money farming? The first cost of clearing this land, as before stated, was \$4,750. That money has all been paid back with large interest long ago. What I wish to do is to spread this information as far and wide as possible, for I am sure with intense cultivation and care that we can double the product of the soil, and that we can make money on the farm. Any one who will send me a two-cent stamp can get this knowledge. I will now give you the results of this year's crop:

From my 11 $\frac{1}{8}$ -acre field, which is all I have down to grass this year, the first crop yield was 120,173 pounds, the second crop 55,650 pounds. Total for the year on the 11 $\frac{1}{8}$ acres, 175,823 pounds—over 7 $\frac{3}{4}$ tons to the acre in the two crops. The $\frac{1}{8}$ -acre field, in 15 years at one seeding has produced 250,650 pounds. I think the yield most remarkable, the 15th year after seeding, over 11 tons of well-dried hay. Please notice that this year there were in the two crops over 11 tons.

One word on the matter of drying my hay. The first crop this year had an average of three full days of good sunshine, the second crop had eight days without rain, five of them bright sunshine; was well tattered and spread and heaped up every night. This is my method of drying hay.

In conclusion I would say that if I were to talk to you a week about my experimental work concerning grass culture and the tools to assist in its production, the story would only begin to be told. You may think that all of these experiments have been attended with success, but I want to tell you that very few of them have. It has been a rough and rugged pathway, filled with breakers along the line.

I have tried all the different kinds of grasses that

I could find, singly and combined, with many of the different kinds together, and have finally adopted two kinds—timothy and red top, as I have found that they work best together and will produce about a ton and a half more hay to the acre. As to the machines to produce the results, I have kept a large force of pattern makers at work for more than thirty years making improved earth-stirring machines. Just a few machines of the thousands that I have perfected have been adopted. I have thus far found only a few machines that I could adapt to produce intense cultivation cheaply. Please bear in mind that these must be obtained to get the largest results.

Once more and I have done. There is everything in this intense cultivation. With it many a farmer can start with his first crop and commence to make money. Why not get out of the old rut, take a small section of land, give it the highest cultivation and care and commence making the farm pay?

TWO WAYS OF IMPROVING RUN-DOWN LANDS.

Editor Southern Planter:

About five years ago two intelligent farmers from Michigan purchased old and badly impoverished cotton plantations in one of the upland counties of North Carolina. These men set about improving their purchases in radically different ways. At the end of five years both seem to have succeeded in building up productive farms.

Farmer No. 1 began by repairing the ramshackle buildings he found on the place and then brought from his former neighborhood a lot of improved breeding stock—cows and hogs. He fed these for the first year mainly on purchased feeds, carefully saving the manure. He broke his land several inches deeper than had ever been seen before in this neighborhood. He planted only what he had stable manure for, allowing the rest to lie fallow. By the fall of the first season he had some thirty acres seeded down to pasture, which by a judicious mixture of grasses makes all the year round grazing. His young stock he was able to sell at fancy prices for breeding, and was thus able to purchase feed and make manure in amazing quantities.

Farmer No. 2 was not a stockman. He went in for grain, and instead of stable manure depended upon green manures. His farm had been much abused by the negro croppers who had infested it for a generation. It was in parts badly gullied and overgrown by brush. The new owner cut off or grubbed the brush and with this filled the gullies. This took him

the greater part of the winter. In spring he plowed the land he had cleared and sowed cow peas, top dressing with lime, kainit and acid phosphate. The peas he cut for hay, plowed the land deeply in fall and sowed oats. Other fields cleared of brush during the summer were in fall sown to a mixture of rye and Scotch vetch. The latter fields gave good pasturage from Christmas to March 30th, and were then allowed to grow for a hay crop which was cut off the latter part of May and the land immediately plowed and planted to corn. The corn received a heavy application of commercial fertilizer, and at the last cultivation or "laying by" Scotch vetch was sown in the middles at the rate of a bushel per acre. This farmer was advised to sow Sand vetch instead of the Scotch variety, but he claimed that the Scotch variety made more and better hay and was as good as the other for manurial purposes. The seed of Scotch vetch also cost only about half as much as Sand vetch, and he was working with an eye to economy. The vetches sown in the corn in August gave a heavy yield of hay the following spring, which our farmer sold to his cotton-growing neighbors at a very good price. Cow peas for seed followed the vetch and came off in time to break the land for fall oats. This farmer seems to make fall oats his main money crop, with summer-grown cow peas, grown for seed, a good second. He uses improved machinery and dispenses almost entirely with hired labor. He will not have a negro tenant on his place nor will he meddle with cotton. His crops of oats and seed peas are sold to his neighbors, and to a large extent are sold on the farm, the purchaser doing the hauling.

The diverse methods pursued by these two farmers have led apparently to the same results as far as improving their farms is concerned. But Farmer No. 1 had plenty of capital and had what few farmers have—special skill in breeding, by which he is able to sell his young stock at prices away beyond the market. He has been fortunate, too, in that he has escaped the losses which often overtake importers of unacclimated stock. Farmer No. 2 seems to have taken the more prudent course. He studied the local markets and resolved to grow the crops he could sell to his neighbors while building up his land. He aimed to keep a growing crop on his land at all seasons. He bought liberally of lime, potash and phosphoric acid, but secured all his nitrogenous plant foods as well as humus by turning under green manures and from the residue of his extensive annual pea crops. This farmer might have increased his income by growing peanuts on some of his summer fields, but his reply to such advice was that to do this

he would have to employ negro labor, which is to him literally a "bete noir." GERALD MCCARTHY.

Raleigh, N. C.

(The Scotch vetch mentioned above is, we presume, the same as the English vetch, which is sold by most seedsmen. We know of no variety of vetch peculiar to Scotland.—ED.)

SOME FACTS ABOUT LIME.

Editor Southern Planter:

Lime has a great affinity for water. A bushel of unslaked lime increases by one-half when thoroughly slaked. Lime should therefore be purchased in the caustic form, for there is no use paying freight on water. Air-slaked lime is not active and of little use except on soils deficient in this element. Caustic or biting lime is very active, binding the fine particles of clay soils together and making them porous and breaking down vegetable matter. Caustic lime tends to form a hard-pan in sandy soils, and so prevents leaching, and it sets free potash and other elements in the soil which are held in unavailable forms, and therefore not useful as plant food. Lime corrects acidity and renders possible the growth of certain crops and enables many useful forms of bacteria to perform their functions.

Lime is not a fertilizer, as many suppose, but rather a corrective of certain undesirable conditions in the soil and a plant stimulant. Applied in moderate amounts, at the rate of from 50 to 60 bushels per acre once in three to five years, it will prove useful on most of our farms. Place the lime in heaps of four or five bushels at convenient distances in the field. Cover with earth and allow to thoroughly slake, and then distribute uniformly over the land. If used indiscriminately and in too large quantities, it will exhaust the soil and in the end be a curse. Lime to be applied profitably should not cost more than 5 to 10 cents per bushel. The so-called agricultural lime offered for sale at \$10 to \$12 per ton is the fresh-burned lime, ground and put up in bags to prevent slaking. It is too costly for a farmer to use at that price.

The need of lime in the soil can be determined by testing it with a sheet of blue litmus paper, which can be obtained from any drugstore at a cost of 5 cents. Put a handful of the soil in a tin cup, moisten with rainwater and insert the paper. If it quickly changes to a red color, the soil is acid and will be greatly benefited by an application of lime.

ANDREW M. SOULE, *Director.*

Experiment Station, Blacksburg, Va.

HOW A SMALL FARM HAS BEEN MADE PROFITABLE.

Editor Southern Planter:

Not hearing much from this section of the country through your valuable paper, thought I would ask for space, thinking it might be helpful to some one to give my plans of working a farm and how my place has improved in the last few years under the rotation I follow. Five years ago the place I now occupy was one field of twenty-six acres, worked by tenants, and a mat of wiregrass. My wife's father built us a nice home, which took up one acre, leaving me with twenty-five acres of open land and about fifteen in timber.

My first step was to divide the place into four fields, all leading to the barn but one. I housed from my first year's work 24 barrels (120 bushels) of corn from one lot of six acres, and 65 bushels of wheat from another lot of six acres, using 400 pounds of guano, 10 acid phosphate and 2 potash. As soon as I could get the wheat off I sowed black peas— $1\frac{1}{2}$ bushels to the acre—plowing them in with a small plow. After I gathered the peas the lot was put in wheat again, using 300 pounds of the same fertilizer, but sowed with disk drill, and harvested from this crop 128 bushels of wheat—an increase of nearly two to one. The lot I made 24 barrels of corn on was followed with peas, then corn again, making 35 barrels. I then put the lot in peas again, following with wheat, making only 50 bushels. After the wheat was taken off I sowed in crimson clover, planting again in corn last spring, and made 61 barrels (305 bushels). The other two lots have been brought up under the same plan. I now have the following rotation:

Lot No. 1, of six acres—Red clover; stubble turned in and sowed in crimson clover, for corn in June.

Lot No. 2, of seven acres—Now in wheat after pea fallow. Would like to say right here I generally use 200 pounds 14 per cent. phosphoric acid on peas and 200 pounds 10 per cent. phosphoric acid and 2 per cent. potash fertilizer on wheat. Think it a better plan than using all on one crop. I expect to follow this crop with crimson clover for corn next year.

Lot No. 3, of six acres—Now in crimson clover, put in at last working of corn; fairly good stand; to be grazed this spring and then put in peas, to be followed with wheat this fall.

Lot No. 4, of six acres—Now in red clover, without any other crop; good stand. In this lot I have only four acres in red clover, the rest in crimson. I harvested from this lot last fall 130 bushels of wheat.

Having a small farm, and no spare land to use

for melons and potatoes, on the lot that comes in wheat I generally use about one acre for Irish potatoes, sweet potatoes and melons. I get two crops of Irish potatoes off the same piece of land before it is time to put the wheat crop in, and the other two crops are of course off. I sow a few peas when the melons are plowed out. Being too far from any city or railroad to keep a dairy, and having only two horses and two cows, I do not make very much manure, so the increase of my crops in the last five years comes largely from the rotation under which my place is worked, with the little application of acid phosphate and potash and good preparation of the land with drag, harrow and roller before the crop is put in.

In conclusion will say, being raised a son of a merchant, I did not know or take any interest in farming until a few years ago, but when I decided to farm I commenced to read your valuable paper, and have not missed a copy since 1894, and expect to read it as long as I follow the plow.

T. S. COURTNEY.

King and Queen Co., Va.

HIGH-MANURING AND INTENSIVE CULTURE OF COTTON—A. B. C. OF FERTILIZATION.

Editor Southern Planter:

As a result of the wide dissemination of my pamphlet, "Three Bales of Cotton Per Acre, and How It Was Made," I am receiving so many letters requesting further information from brother cotton planters all over the entire cotton belt that this increased correspondence is fast becoming quite an "elephant" on my hands, and more especially as many of my enquiring friends, although desirous of an early answer to each and all of their many and widely-varied queries, are so forgetful as to fail to enclose stamp for reply.

To such an extent has this correspondence grown that I feel obliged, as a matter of self-protection, to get the long-suffering and proverbially-patient editors of the agricultural press to help me out of my difficulty by publishing one or more letters on High-Manuring and Intensive Culture, which I hope will be the means of throwing light on dark places and make the matter of economical fertilization so plain that all may understand. To commence, we would say, disabuse yourself of the idea that, in order to prescribe a formula for any given soil, it is not necessary to know, and let the one who does the prescribing know, the color and consistency of the various classes of soils. In order to prescribe intelligently for each

and every class of soil, it is all-sufficient that the prescriber know whether the soil be sandy or clayey, poor or rich, high or low, wet or dry and warm or cold-natured; also the fineness or coarseness of the sand or gravel, or the degree of tenacity of the clay.

What each and every soil-tiller is mainly interested in, and upon which he must base his operations, if he fertilize intelligently, skilfully and economically, is the normal growth and fruitfulness of each and all of his several crops in a normal season. This is a rational, common-sense plan, simple and pre-eminently practical, and the only plan which can possibly be followed with a positive assurance of success; all else is mere haphazard and chance work. I am thus positive because I know what I am talking about, and I am sure of my ground, hence can afford to be positive. This narrows the matter down to three propositions: First, the soil-tiller *must*, in order to fertilize intelligently, *know his soil*. Second, he must *know his crops*; and third, he must *know* the tools he has to work with and what they are individually and collectively capable of accomplishing when rightly handled. I will consider the latter proposition first, as this brings us to the functions of each of the more important plant foods—to wit, nitrogen, phosphorus and potassium, as without this knowledge it is an absolute impossibility to fertilize understandingly; and, as a matter of course, it is equally impossible to fertilize intelligently where one fails to understand what they are doing and why they do it.

Briefly stated, it is the function of nitrogen to promote the growth of stalk or stem, or woody growth generally, and create a dense and luxuriant growth of foliage; but while the growth of stalk, stem or vine and leaves is greatly promoted thereby, that of buds and flowers is retarded. This explains why cotton planted in very rich lands that contain an excess of (organic) nitrogen makes an excessive weed growth, but has a decided deficiency of bolls. This same effect of "excess of nitrogen" is also abundantly illustrated in crops other than cotton, as for instance, Irish or sweet potatoes all gone to top, but with no tubers; peanuts, with luxuriant tops, but no nuts under them; the cereals, with superabundance of straw, but with extremely diminutive heads and very inferior grain. Instances could be multiplied indefinitely showing the injurious effects of excess of nitrogen; but I will content myself by merely stating the important fact that this "excess" is more apparent than real; in fact, is not really and truly an excess at all, but an inequality indicating a lack of phosphoric acid and potash. If it were really and truly an "excess," then would our friends be right who

claim that the above-described class of lands is "too rich for cotton" or potatoes, or goobers, or grain; but this we all know is not the case. Land never gets "too rich" when its fertilizing constituents are properly balanced and so proportioned as to insure an equilibrium of all the elements of fertility.

The functions of phosphoric acid are mainly to increase fructivity or seed development and to hasten maturity. This is very important (1) on all alluvial soils, where stalk growth is excessive and fruitage deficient, and (2) on any and all soils where phosphoric acid is lacking, as evidenced by a sufficiency of stalk but deficient fruitage.

The functions of potash are to give strength and vigor to the entire plant, to specially develop the production of lint, and, incidentally, to increase the size of the bolls.

Now, by bearing these facts in mind and by diligently observing the growth of the young plants in a normal season, and making all due allowances for abnormalities or abnormal conditions of any and all kinds, it is by no means a difficult matter for one to decide, near enough for all practical purposes, what elements are needed by each class of soil.

All old, well-worn soils are deficient in humus, hence the necessity for a systematic rotation. They are also deficient in nitrogen, hence the necessity for cow peas, crimson clover or vetches to enter freely into the rotation, for the reason that even if it has been found profitable to purchase nitrogen it is certainly much cheaper and more satisfactory to raise it at home. They are also invariably deficient in phosphoric acid and always short of available potash, hence the necessity on all old, well-worn soils of what is generally known as a "complete" fertilizer, or one containing all three of the leading elements of fertility—viz., nitrogen, phosphoric acid and potash. It is on this class of lands that stable manure and coarse litter of any kind gets in its best work, the coarsest being always reserved for and applied as a top dressing to thin, weak and galled spots, while the stable or lot manure should invariably be applied broadcast to poor or medium fertile soils. Very rich (alluvial) soils are injured by either peas sown on them or manure applied to them. They do not need either one. All they do need is phosphate and potash, and these two latter agents liberally applied. The important fact should be borne in mind that land destitute of or lacking in "humus" will not bear a heavy application of the more concentrated chemical fertilizers; 200 to 400 pounds per acre would be about all that could be applied to such to advantage, while 400 to 800 pounds would be found decidedly

more profitable than would half this amount on richer lands. As the supply of humus increases in any given soil, even so the applications of the more concentrated chemical fertilizers may be correspondingly increased, until 2,000 to 4,000 pounds have been, and may be again, profitably used, even in cotton culture.

Mr. J. C. Sims, of Coweta county, Ga., who was awarded a premium for best yield on five acres, and who used two tons of high-grade (10-3-4) fertilizer to each acre, is said to have made five bales per acre—25 bales on the five acres. Mr. Sims stated to me personally that he was a strong believer in potash for cotton, and made it a rule never to purchase a fertilizer that did not contain as much as 4 per cent. of it. He said that at first he had considerable trouble with the manufacturers in getting them to put that much potash in, but as he was as determined as they were, and would accept that much or none, the manufacturers were forced to yield or fail to make a sale. It has been my good fortune to travel almost the entire cotton belt over, and during my travels I have repeatedly noticed dealers in fertilizers who were inclined to palm off low-grade (8-2-2) fertilizers on their customers, representing them to be "as good as any," in fact "the best," and "just the thing for the cotton-planter," especially when said brand had a high-sounding name, as "Farmers' Standard," etc., etc., when the fact of the matter is that these low-grade (8-2-1, 8-2-1½ and 8-2-2) goods are not calculated to give best results for either cotton or corn on any soil, either clayey or sandy, and more especially the latter. As a complete cotton fertilizer, 10-3-3 is little enough, and 10-3-4 is better. It takes potash to make lint and to give us a large, well-filled, heavy boll, and it is the bolls the cotton-raiser is after.

A word to the wise is sufficient.

No land should be planted in cotton that will not yield a half-bale per acre in a normal season, while the one, two and three, or even more, bales per acre (being a possibility) should be striven for by every skilful cultivator each and every year that rolls round.

Let "Bales Per Acre" be our motto, instead of taking acres to make a bale.

As labor is annually becoming scarcer, more unreliable and less desirable and more difficult to engage, an increased yield from a decreased acreage must be the future policy of all those who would raise the fleecy staple at a profit.

More on this same subject in our next.

Burgess, Miss.

G. H. TURNER.

GOOD PLOWING.

Editor Southern Planter:

Referring to your recent editorial as to proper methods in plowing, I regret to say the same careless indifference prevails in Maryland as in Virginia. The thoughtless plowman invariably starts his plow at the entrance to a field and proceeds to go around it, throwing his furrows to the fence or roadside, and ends in the middle with his team struggling over the ground plowed. Now, it is much better and easier for the team and man to reverse this plan; but the untaught plowman does not know how to lay off the land for that purpose, therefore every farmer should practice for himself and teach his men these simple rules: First find the width of a field or plat by pacing the end (a pace is about three feet—some may call it stepping off a field). Suppose it to be 100 paces. Now turn at a right angle and pace one-half the width down the side of the field or plat (in this case 50 paces). Turn about again at a right angle and pace back parallel to the end the same number of paces and set a stake. Go to the other end of the plat and set stake B by the same process. This may seem troublesome, but after I have trained my men to do this I have also taught them to measure a field by the eye alone. If the field is nearly square the centre may easily be sought by the eye alone, specially if it has been plowed around and around for several years in succession. The field in that case is like a shallow basin. I bought one with such a hollow. I had to drain it. I daily pass a truck farm, the owner of which has plowed after this manner the same land for twenty-five years and more and has two covered ditches to drain two or three acres of high, light soil. He has in this time thrown his best soil to the fences and roadsides, and the ridge so made is luxuriant in noxious weeds. The worst for his neighbors is the yellow dock, filled with seeds annually. The few fence posts are covered with poison ivy and honeysuckles, as well as green briar, whilst along the road are blackberry, sumac and many useless bushes of all kinds, sown by the birds on most fertile ground. On the opposite side of the road is a neat, plain cable wire fence, and the roadside as clean as it is possible to make, and the land rises from this fence to the centre of the field. I feel quite sure that if the owners on both sides were readers of the SOUTHERN PLANTER they would not exhibit so great a contrast.

I have neglected to state that after a field has been laid off, as shown by the rules, it is to be back furrowed. Beginning at stake A, and turning at stake B, and so continue to throw the furrows inward until finished. This leaves the land solid for the team to

leave the field when the plowing is done. I assure the reader that after trying this plan a few times the most obstinate plowman will adhere to it of his own free will, and will cover his three acres a day with less fatigue than by the old roundabout method.

OTIS BIGELOW.

Montgomery Co., Md.

CORN YIELD.

Editor Southern Planter:

I see through the columns of your valuable paper you call on farmers for their yields per acre of different crops raised by them for last year (1904). I planted last year nine acres in corn, checked out 3 feet 7 inches each way. One of these acres was in an orchard (apples, peaches and pears). I gathered from the nine acres 122 barrels (610 bushels) of corn. Of course the orchard acre did not yield more than half as much per acre as did the others. This land was not manured or fertilized in any way.

My farm is in four fields, the rotation being corn, clover, pasture and trucks. I hardly ever sow grain.

Accomac Co., Va.

S. D. FLETCHER.

VIRGINIA STATE VETERINARY ASSOCIATION.

The annual meeting of this medical association was held at the office of Dr. T. Fraser, Richmond. There was a large attendance of veterinarians from different parts of the State. The following members were elected officers for the ensuing year: Dr. Fawcett, of Norfolk, president; Dr. C. H. Epps, of Richmond, first vice-president; Dr. J. Spencer, of Blacksburg, second vice-president; Dr. Gilchrist, of Norfolk, secretary and treasurer.

A very interesting paper, on milk fever, was read by Dr. Spencer, which elicited considerable discussion. Papers were also read by Drs. Neff, of Staunton, and Fraser, of Richmond. The meeting of the State Board of Examiners was held at the same time and place as the meeting of the association. There being no candidates for examination there was no business of importance. The next meeting of the Board and of the Association will be held in Norfolk, June 29, 1905.

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The seasonable change in the weather which set in about March 18th gave the much-needed opportunity for beginning work in the garden and truck fields, which is way behind all through the South. No time should now be lost in getting the land prepared for the summer crops. Get the manure and compost heaps spread on the land and worked in, and supplement these liberally with acid phosphate and potash. All vegetable crops to be of fine quality require to be quickly grown, and this can only be done by making the land rich and working it into a fine mechanical and physical condition. From 500 to 1,000 pounds to the acre of acid phosphate, from 50 to 100 pounds to the acre of muriate of potash and 200 or 300 pounds of cotton-seed meal to the acre can be usefully added to liberal fertilization with farm-yard manure. After the crops begin to grow, nitrate of soda at the rate of 100 pounds to the acre can also usefully be applied as a top dressing to most crops.

Before beginning to plant any crops, lay out the garden on a plan so as to provide a sufficient supply of each different kind of vegetable for the home table to follow each other in succession, and let the rows for these different crops run the length of the garden, and have space enough between them to admit of cultivation by a horse. Crops planted in this way are much more certain to receive proper attention than when planted in short rows and beds so as to necessitate hand cultivation. Too often when this is the case the cultivation is neglected and the crop does not make the return it ought to do.

Whilst it is too early to plant any crops except English peas and Irish potatoes and small lots of early salads in sheltered spots in this State and North Carolina until the end of the month or beginning of May, it is not too early to have all the beds and rows laid off and the ground got ready for planting. Let this work be done before work on the farm becomes too pressing, or it is very apt to be neglected. It is one of the failings of the Southern farmer that he will not give enough attention to his garden to ensure a constant supply through the summer and fall of all the various table crops which we can so easily grow. On thousands of farms in the South the only things to be found in the garden are a few cabbages, some kale and small patches of sweet and Irish potatoes. This is not as it ought to be, and is a

gross injustice to the women of the household, who are expected to find and provide good, appetizing meals every day. They are worse off than the Israelites of old, who had to make bricks without straw. See to it that there is a change in this this year. Watch our garden columns and plant the crops we advise at the time we advise planting, and your table need never be lacking in vegetables and fruits from early summer to winter. These are more wholesome than meat in the hot weather, and tend greatly to maintain good health in the family.

Plants raised in hotbeds should be gradually hardened off by exposure to the air during the day, so that they may be ready to set out when the warm weather fairly sets in. Sweet potatoes should be bedded in hotbeds to provide plants. Make the hotbed about 12 or 15 inches deep of fresh stable manure, filled in compactly, and cover with three or four inches of good soil. Let the first fiery heat begin to cool down before putting in the potatoes. Lay them in a single layer and cover with wood mold or light sandy soil, and cover the bed with sash or muslin to keep out the rain. Keep moist but not wet. The seeds of egg-plants, tomatoes and peppers should be sown in mild hotbeds or under sash. A few cantaloupe seeds should also be started in hotbeds or under sash to provide plants for early setting out. Land should be prepared for the cantaloupe and melon crop. Cantaloupes should be sown four feet apart each way. Put in half a dozen seeds in each hill and thin out to single plants after they have gotten rough leaves. Melons should be sown 8 feet apart each way. Make the hills for the cantaloupes and melons by throwing out the soil a spade graft deep and put in each hill two or three forkfuls of good rotted manure, and then add a handful of a good fertilizer and mix all together with the soil, leaving the hill a little above the level of the surrounding soil. In our February issue will be found formulas for mixing fertilizers for different vegetable crops.

In our March issue we gave advice as to strawberry beds and other small fruit crops.

Do not neglect the spraying of the orchard and vineyard. In our March issue will be found full instructions on this subject.

Let the lawn and flower garden have attention by cleaning up all trash and digging over the beds and

giving them a dressing of manure so that they may be ready for the planting of the seeds and the setting out of the plants from the pit or house when the weather becomes warm. If the lawn does not start to grow freely give it a top dressing of nitrate of soda, 100 pounds to the acre, with 100 pounds of bone meal. Rake this in lightly and then roll. Timely attention to the lawn and flower garden will add much to the attraction of the home. Flower seeds are cheap enough for every one to have a constant succession of bloom all through the summer.

TOMATO GROWING.

The tomato is a plant that responds well to heavy fertilization. The best method is to use part farmyard manure and part fertilizer. Put a couple of forkfuls of good rotted manure in each hill and then add to each hill a good handful of fertilizer made by mixing 600 pounds of acid phosphate, 300 pounds of muriate of potash and 500 pounds of tankage or cotton-seed meal. Mix with the manure and soil, and at the time of setting out the plants apply 100 pounds to the acre of nitrate of soda by spreading a small quantity around on each hill, not touching the plants. In experiments made at the New Jersey Station, nitrate of soda used at the rate of 160 pounds to the acre in one application and at the rate of 320 pounds to the acre in two applications increased the yield materially. Have the plants raised and hardened off ready to set out in May. They should be transplanted once or twice from the time they started in the seed bed in order to secure short, stocky plants. Cultivate frequently—at first deep and then shallow, and keep level.

THE FARMER'S GARDEN.

Editor Southern Planter:

The desire to plant seed of some kind when the earth is being warmed by the genial rays of the sun in the early spring is almost universal. In fact a home without flowers of some kind growing around it is sadly lacking in something that contributes to human happiness.

Let us make ready to plant seeds now. The Government spends thousands of dollars annually to furnish its citizens with garden seeds. (A gross abuse of the functions of a government.—Ed.) Whether this be good policy or not, let us plant some seeds. Most children like to plant seeds and see them germinate, make root and grow. Many valuable lessons in nature study can be taught them in this way. Chil-

dren often look upon rain as a great hinderance and grievance to them, in that it involves keeping them shut in from out door play; yet if it were not for the rain the millions of tiny seeds in the ground would not grow and clothe the earth in verdure and rich harvests.

We will take it for granted that the farmer has his garden well fenced to keep out stock and fowls of all kinds; if not, it is apt to be a source of annoyance instead of pleasure. The soil should be made rich with composts and well-rotted manures. The ground should not be plowed when too wet or too dry, since hard clods are apt to give trouble all summer.

Some seeds need to be planted deeper than others. I have found the following rule a fairly good one by which to be guided in planting seeds. Plant them about five times deeper than the diameter of the seed. A soil that is inclined to be wet should have the seed planted more shallow than one that is inclined to be dry. The seed should be planted deeper late in the season than when put in early in the spring.

A length of cord or small rope is an excellent thing to stretch across the garden to set out the rows straight. Crooked rows are unsightly. They drive one away from the garden instead of inviting to it; besides, they cause difficulty in cultivating the crop.

We ought to plant the best standard varieties of all kinds suitable to the section. At the same time, we should plant a few novelties in an experimental way. After a number of years of experimental work, I have found the following varieties a good list for the garden: Sweet corn—Adams' Extra early, followed by Stowell's Ever Green. Cabbage—Early Jersey Wakefield, followed by Late Flat Dutch. Tomatoes—Early Aeme and Livingston's Beauty. Beet—Early Eclipse. Snap Beans—Early Red Valentine. Lettuce—Black Seeded Simpson. Radish—Chartier. Cantaloupe—Rockyford. Cucumber—White Spine. Turnip—Purple Top Strap Leaf. Irish potato—Late Rose. Onion—the variety commonly sold as "Potato Onion." It is late now to sow the black seed. If used, try the Weathersfield or the Silver Skin varieties. The garden is not complete without some strawberries growing in it. The plants should have been set last fall, but they can be set now. Try the Haverland variety. Make the rows three feet apart and set the plants twelve inches apart in the row. Use good garden loam soil, fairly free from troublesome weeds or grass.

Of course such small fruits as raspberries, currants, &c., should be in the garden, but these must be discussed in another article. R. H. PRICE.

Montgomery Co., Va.

Live Stock and Dairy.

DAIRYING IN VIRGINIA.

At a recent meeting of the Ingleside Farmers' Club, held at Burkeville, Va., Mr. T. O. Sandy, of Burkeville, a most successful dairy farmer, was invited to address the members on Dairying in Virginia. We condense his remarks on this subject. He first discussed the question of the feed for the herd, and pointed out that it was essential to success that a balanced ration should be fed. This ration can be grown on every Virginia farm, and should consist of corn ensilage, cowpea hay, corn fodder and clover hay for roughage and corn for the grain ration. He allows 200 cubic feet of space in the silo for the silage feed of each cow. This allows of the feeding of 35 pounds of silage per day per cow for 200 days. A good stave silo to hold ensilage enough to feed 15 to 20 cows can be built for \$60. The cost of raising the corn for ensilage and putting same into the silo he placed at \$1 per ton. This, with the cost of the silo, would make $3\frac{1}{2}$ tons the amount of ensilage required to feed a cow for 200 days cost \$7. About 10 acres of peas will be required to feed 15 or 18 cows. These should be made into hay when the pods begin to ripen. To provide the corn for the grain ration and fodder 20 acres should be planted. The corn is to be husked and the fodder cut up with the ensilage cutter and be fed dry to the cows, as much as they will eat each day. Having thus provided the feed, the next requisite is the cows. He advised that these should be bred at home. Select the best cows you can find and breed them to a pure-bred bull of one of the dairy breeds whose ancestors were good dairy animals. The heifers will show a great improvement on the dams, and many of them will prove excellent dairy cows. Every cow and heifer should be tested by the Babcock test, and only those that will pay their way should be kept. The others should be fattened and sent to the butcher. A fairly good dairy cow will pay the owner, if properly fed, \$125 per year, and her manure will be worth on the farm \$19 each year, making together \$144. Her keep will cost \$44 per year, leaving \$100 per year to pay for the trouble and care of attending to her and for interest on the investment in land and stock. The skim milk should be fed to hogs, and this, with pumpkins, turnips and some corn and ensilage fed them, will make a profitable addition to the dairy. Mr. Sandy said he was satisfied that beef-making, carried on in the same lines, could also be made profitable in Virginia.

THE COLOR OF ANGUS CATTLE.

In replying to an enquiry in our last issue on this subject, we inadvertently made an error to which our attention has been drawn by two or three Angus breeders. We said the Angus cattle were all black. Speaking broadly, this is true, but many of the cattle show a little white in the underline. Seen from a distance this is not observable, and the cattle appear all black. A little white does not prevent cows being registered if otherwise eligible, but a bull cannot be registered with any white upon him anywhere except upon the underline. The effort of all breeders is to eliminate the white and have solid black stock. There have been solid red Angus cattle bred, but these are now rarely seen and are not sought by breeders.

ANENT HEREFORDS.

Editor Southern Planter:

Alvin H. Saunders, the greatest authority on Short Horns, editor of *Breeders' Gazette* and live stock statistician, says: "It has always been demonstrated that Herefords are great cattle where grass grows. The more grass the more Hereford cattle will be needed, and, with all due respect for other breeds, Herefords will make more beef on grass than any other breed of which I have a knowledge." Adding the comment of the greatest cattle breeder of the day, "This is equivalent to saying that the Hereford is the most profitable of beef breeds, for no experienced cattle man will gainsay the tried and tested fact that the animal which does the best on grass will do the best under any conditions." The Hereford is the "King of Rustlers," the first to ripen in the feed lot, the last to succumb to hardships. Not long ago I heard Joseph E. Wing, the great agricultural writer, who was formerly a ranchman, say, "The Hereford will do better on grass and scenery (referring to our mountains in Virginia) than any other breed." The Hereford bull is the most prepotent of any breed. It makes no difference what kind or breed of cows he is crossed on—Short-Horn, Angus, Jersey, grade or scrub—the progeny is almost invariably a red, white-faced calf, inheriting the quick maturing, beefy form, hustling characteristics of the sire. I was once connected with a fine herd of Herefords in the central part of this State, which belonged to a gentleman who also kept a few pure-bred Jerseys—some six or seven. We bred these cows to our young Hereford

bulls. We usually kept the calves from this cross to five and six weeks of age, selling them as veals in Richmond, netting us something like \$14 to \$16 per head. They always inherited the typical Hereford markings. These calves, in addition to the mother's milk, got what dry, ground grain they would eat from a trough, weighing when sold from 200 to 240 pounds each. A three-quarter, a half, and even a quarter-bred Hereford bull will almost invariably brand his calves with the white face, a trade-mark which is worth dollars to a bunch of calves. Uniformity is a great consideration. The Hereford is unquestionably the most docile of all breeds. This disposition of quietness and gentleness is an important one, as a restless, nervous, fractious animal cannot put on fat. The Hereford has the best coat, and more able to resist the cold and rain, with poor or no shelter, than any other breed. They have been bred to this end for generations. Here in Virginia the conditions are not the same, nor do they approach the range conditions, except in this, that the great majority of our cattle have to subsist on grass in summer and roughness, without supplementary feed in winter.

The hardiest, quickest maturing cattle raised under range conditions would be the best for our purpose and conditions. The evidence of at least ninety per cent. of the range men is in favor of the Hereford. It might not be amiss to quote from two or three prominent ones. Governor Sparks, of Arizona, who has had thirty-five years experience with cattle on the range, says: "No person can justly say that I am prejudiced against any breed. I have bought the best specimens, both imported and home-bred, of both sexes, of the Angus, Short-Horn, Galloway, Devon and Hereford breeds, paying long prices for them to use on the range, and while other breeds are very good under favorable conditions, the 'Whitefaces' are the rustlers, and produce the class of beef that sells first, and for the most dollars, whether off the ordinary farm or range. The cows are hardy and fine mothers. As to Hereford bulls, my experience has clearly proven that they are very much harder and will beget more and stronger calves than bulls of any other breed."

Mr. W. A. Morgan, a prominent ranchman of Topeka, Kan., has this to say: "The Hereford bull, crossed on native cows, impresses his progeny more uniformly with his characteristics than the progeny of any other breed. The writer has had considerable experience for the past seventeen years in Arizona and elsewhere, where the frequent droughts and long distances they often have to go for water, and frequently on short feed, requires a hardy constitution

and a good rustler, and the cross of a recorded Hereford bull on a native cow produces a better beef animal than the cross of any other breed."

This article is not intended as an answer to any article which has before appeared in this paper in regard to the question as to which is the best beef breed. We all have personal preferences, but in a great majority the preference is influenced by the dollars in profit. I regret very much that there is a tendency to renew the "Battle of the Breeds" here in Virginia. Such a course would be very trying to the printer, and at last no conclusion would be reached, intending purchasers would be mystified and hard feeling result. Let us dwell in peace, one with another, each upholding his own, deeming no one. I have had considerable experience with all the beef breeds—Angus, Short-Horn and Hereford. I admire them all. Either is infinitely better than the grade and scrub usually found in the pastures of the South. We, as breeders, should pull together—encourage the farmer to raise better stock, more grass, more manure, which means less commercial fertilizer, more profit, less labor, rich lands. Our farmer neighbors and butchers here in Clarke county say they do not like Herefords. When asked for a reason they say, "They keep too fat, even on grass." I consider this one of the greatest tributes ever paid to Hereford cattle. The intelligent farmer and stockman wants the kind "that stay *too* fat on grass." There has been much said and written about the milking qualities of the Herefords. I am often asked if our cows give enough milk to raise the calves. I invariably reply, "Look at the calves; we use no nurse cows." Our calves at six months of age usually weigh over 500 pounds—very frequently 600 pounds. The Hereford is a beef breed, bred and fashioned to that purpose through generations—the oldest of all beef breeds; yet, as a matter of necessity, as with the Short-Horn and Angus, they give sufficient milk for their offspring. Any more than this would be a drain on the mother which would require a great deal of feed to offset. There is no such thing as a dual purpose animal—such is a myth, and can only be accomplished by the false, impractical system of double mating. While there are individual specimens in every herd, of every breed, which give enough milk to raise their calves fat and sleek, and enough for cream and butter, it is not characteristic of any breed. We have registered cows, most fashionably bred, which will equal any of the dairy breeds in quality and quantity of milk. Not so many years ago there were few Herefords in Virginia; to-day the Old Dominion is a Hereford stronghold; so through sheer force of merit; the home-

of some of the very best herds and famous bulls. Who has not heard of Acrobat, Salisbury, Prince Rupert! For those who want more light on this subject, write to Hon. F. D. Coburn, Secretary Kansas State Board of Agriculture, for Report No. 80, for quarter ending December, 1901. It is a book of some 230 pages, finely illustrated, and will be sent free. Get it.

In conclusion let me say the *SOUTHERN PLANTER* is the best farm and stock paper published in the United States, and much credit is due it for the changed agricultural conditions of the South.

L. ROY STACY,
Rosemont Farm.

Clarke Co., Va.

CHEAPEST WAY OF WINTERING BEEF CATTLE.

Editor Southern Planter:

Breeders generally recognize that grass provides the ideal food for making beef, and that beef made on grass is produced at a lower cost than in any other way. Grass under the most favorable conditions, however, can only be counted on for from six to eight months. It will be remarkable if it is of good quality throughout the entire grazing season, for at some period or other there is almost certain to be a drought which will cut short the pastures and of necessity the gains of the cattle running thereon will not be large. Some farmers may even maintain that a longer grazing season is possible. This, however, necessitates turning the cattle on the grass too early in the spring, and the policy is bad from any viewpoint, for, in the first place, the grass is so sappy that the animals are likely to "drift" badly, or at least will not make any gains, and besides the pastures suffer from early grazing before the grass has made considerable growth. Were grass available all the year round, the question of the winter feeding of beef cattle would be solved, but as it is, there is a period of from five to six months when food must be supplied in some other form. The question is, How can this food be supplied in the cheapest manner and yet suit the requirements of the animal so as to insure gain?

The methods of winter feeding followed at present by stockmen who expect to run their cattle on grass the following spring and summer are many and varied. As a rule the stockman of experience does not count on feeding his cattle much before the first of December, and in seasons that are at all favorable feed is often not supplied until January 1st. Of course a good deal of picking can be obtained in open winters on pastures that have been saved during the previous summer and allowed to make a heavy top, for while the blue grass seems dead and innutritious,

still cattle will eat it with a good deal of relish, and it is surprising, all things considered, how well they will do on it. Providing it were possible to carry the cattle for some considerable length of time by such methods, the advisability of the practice is doubtful. It is simply subjecting the pastures to an abnormal strain during their rest season, and the necessity of a rest period for the land is evident to all thinking persons. It will be economy in the long run to feed for five months, especially when many forms of roughness can be provided that are quite satisfactory at a moderate cost.

Many feeders at the present time maintain their cattle through the winter on the cheapest forms of roughness, such as corn fodder, shredded stover and wheat straw. These foodstuffs, if well preserved and fed in a palatable form, contain a good deal of nutriment, and cattle will about hold their own on them. If a small amount of grain is feed along with the roughness in a judicious manner, slight gains may be looked for—from one-half to one pound per head per day. At the present time the winter feeding is often done in such an indifferent manner that the cattle lose anywhere from 50 to 150 pounds per head from the time they are taken off grass in the fall until they are again turned on the grass in the spring. This is a heavy shrinkage, and one which the cattlemen cannot afford to overlook. It often happens that the same foodstuffs in the hands of another man will be used so as to insure the gain referred to above. Thus, while one man loses 150 pounds per head on his feeding, his neighbor is making a gain of 150 pounds. There is thus a difference of 300 pounds as a result of better feed and treatment, though the same form of roughness may be used by both feeders. The cattle of B. are worth \$15 more per head, with beef at 5 cents per pound, when the grazing season opens up, than those of A., and they are in condition to make just as good gains on grass as his. Of course there will be no "fill-up" in the case of B.'s cattle as in the case of A.'s, but there is all the difference in the world between "fill-up" and the production of flesh and fat. This is a very important point, and should not be lost sight of by the man who argues that he winters his cattle so cheaply because he feeds them nothing and allows them to fall off in flesh.

The difference in value of the two sets of animals has been made by simply utilizing the cheap forms of roughness which should be produced on any stock farm where a rotation of crops is followed. Unfortunately, the roughness is too often neglected and despised and deemed unprofitable to handle in any way, yet a gain of three-fourths to one and one-half

pounds per day can be made for 150 days on ordinary stock cattle without feeding more than four pounds of grain per day. The grain ration at the present price for corn and cotton-seed meal would not cost much over 4 cents, or \$6 for the entire period. If it consisted largely of cotton-seed meal, a part of this cost would be repaid to the owner through the enrichment of his manure heap by reason of feeding so concentrated a fodder stuff as cotton-seed meal. The corn fodder, shredded stover, straw or whatever else was fed would thus be worth about \$9 to the farmer, though it is doubtful if a single animal would consume more than one and one-half to two tons of shredded stover in the time mentioned. This would give the stover a feeding value of between \$5 and \$6 per ton. Is it not vastly better to utilize this roughness so as to make it a profitable by-product in the making of beef and in materially increasing the manure pile which the farmer must depend on more largely in the future to maintain an available supply of plant food in his soil for the growth of crops?

With a similar grain ration, cattle fed on a good quality of either corn or sorghum silage, not to exceed 30 pounds per day, and given the run of a straw stack, should make from one and one-half to two pounds of gain per head per day. The gains will depend somewhat on the condition of the cattle when taken off the grass, but under good management they should not fall much below one and one-half pounds. Many feeders are afraid of silage, especially where they propose to finish cattle on grass, and it is a fact that they will "drift" considerably—much more so than dry-fed cattle—but drifting, after all, where the cattle are put on a good quality of grass, and the grain ration not cut off all at once, is not as serious a question as many suppose. *It is a fact not willingly admitted by many feeders, but under the best system of management a pound of gain can be made in winter on silage at practically the same cost as on grass.* This is a new proposition to many persons who are interested in the cheap winter maintenance of beef cattle, and it is one that they should go to the very bottom of, for it means a great deal to them. It is a subject that will bear the closest investigation and scrutiny. Even at the present time there are those who believe in the wonderful possibilities and advantages silage provides, while there are others who have tried it and failed and cannot condemn it too strongly. The fact that a percentage who have tried it succeeded shows that under good management it is a most excellent form of roughness for winter feeding.

Another favorite way of maintaining cattle through the winter is to grow corn in the form of

fodder, cut and shock by hand or with the harvester, and feed from the sheaf without husking. The corn is grown thickly, so as to secure a large proportion of medium-sized ears. This is certainly one of the most economical and best methods of maintaining cattle through the winter, though the process is of course wasteful in some respects, and it is still an open question what gains may be expected from this practice as compared with feeding in an open shed where the feed can be given in a more economical and palatable form in conjunction with a small meal ration. In some respects it is hard to conceive how a cheaper method of handling cattle in the winter could be devised, and yet from the figures furnished by some feeders it does not seem that they have made the gains which should have followed. This subject is one requiring full investigation, and it is the hope of the writer to get some enlightenment along this line at no distant date from feeding trials at the Station.

Another roughness frequently used for winter feeding is timothy hay. Timothy hay is not rich in feeding nutrients, and will not give very much better results than shredded stover. In the one case, shredded stover is a by-product having a low market value, whereas timothy hay is generally in good demand at from \$12 to \$15 per ton. If the farmer gets practically the same results from shredded stover as from timothy hay, it is a foregone conclusion that he cannot afford to use the latter in the winter feeding of beef cattle at the prices indicated. While timothy hay is not fed as a rule, it is fed too extensively. It should rather be made a source of profitable cash revenue and its place in the ration filled by cheaper foodstuffs.

Clover hay should be grown and used more commonly for the winter maintenance of beef cattle. It should not provide the sole roughness, but a moderate amount fed each day with shredded stover, silage and straw will add to the palatability of the ration and will insure the animals making better gains and at a lower cost. Clover naturally grows so well in many sections that it is rather remarkable that it should not be more commonly found on the stock farm, but observation lends color to the belief that timothy, because of its permanency in the meadow, often takes its place.

The question is often debated whether it will pay to feed grain to stock cattle. In the writer's opinion the answer will always be in the positive form, for the roughness produced on the average farm will not do more than provide a maintenance ration, and it will often do well to do that. A large amount of

grain is not necessary, but for this class of cattle the food should be rich in protein elements for growth and development are the objects sought. For this reason cotton-seed meal can be used with corn to the best advantage in the proportion of at least two-thirds cotton-seed meal and one-third corn meal.

The gains that may be expected from winter feeding with the various forms of roughness indicated have already been mentioned. These, of course, represent only averages. The variation in gains obtained in actual practice is quite remarkable and is accounted for by the difference in management. One reason why many feeders are dissatisfied with feeding grain in the winter is because of the exclusive use of corn or corn and bran. The latter in proportion to the protein content is too high priced to feed to beef cattle. Then, cattle fed through the winter are often turned on grass too early in the spring, when it is still very sappy, and frequently the mistake is made of suddenly cutting off the grain ration. It is no wonder under these conditions that the animal should drift and make unsatisfactory gains from 30 to 60 days when they are trying to regain an equilibrium. The cattle should be turned on grass gradually, and the grain should not be cut off all at once. Take from two weeks to thirty days to cut it down, and then if first-class blue grass pastures are available the drift will not amount to much. It is an undecided question as yet whether it will pay to feed grain through the grazing season or not, but on good grass it is an extremely doubtful proposition, except where the cattle have been on forced feed during the winter, and it is only desirable to let them run on grass two to three months to obtain a fine coat and a high finish.

Should cattle be fed under shelter or in an open shed? Provided the animals can be protected from cold rains and sleet and snow, a shelter of itself will not add materially to the gain, but cattlemen will find it profitable to have a shed, though the structure may be very cheap, so the cattle can find a warm, dry place to rest in during cold, wet weather. Animal comfort is a matter of the greatest importance and is one of the most certain means of maintaining good gains. Cattle that are exposed to cold and wet, and kept in muddy quarters, will not make anything like as good returns as cattle receiving more judicious treatment. Keep your cattle growing through the winter. The cheapest animal is the animal that grows uniformly from birth to maturity. It does not pay to allow animals to undergo a "slump." It is not necessary that the ration through the winter be a very expensive one in order to keep the animals

gaining and in good condition, and if they are properly handled when turned on the grass they should not drift seriously, and yet the owner should have made with the consumption of a small amount of grain and roughness, which should be available on every farm, from 150 to 200 pounds of beef per head during the winter season. ANDREW M. SOULE.

Virginia Experiment Station.

SWEET CREAM BUTTER.

Editor Southern Planter:

I have read many articles in the SOUTHERN PLANTER about home butter making, and find from my own experience that there is no butter so sweet as that churned from sweet cream, even in the dead of winter. Butter churned from sweet cream cannot get rancid. I have taken a jar of sweet cream, frozen through, and set the jar in hot water, stirring it occasionally until the cream was as warm as new milk, then poured it into my scalded churn, and the butter made in from five to ten minutes. The reason there is so much poor and strong butter made is that the cream is kept too long, or until rancid, before churned, which makes strong, rancid butter. A friend of mine who has lived in Virginia over eighty years never heard of churning sweet cream, but said it did make the sweetest butter she had ever eaten. I have neighbors who keep the cream for ten days by the fire waiting for it to turn before churning, which makes such strong butter that it is only fit for axle grease. In the summer I keep my cream in a spring house, and when I get a jar full I churn it and always have nice, sweet butter, even in the hottest weather.

MRS. B. B. HALSEY.

ANGORAS IN VIRGINIA.

Editor Southern Planter:

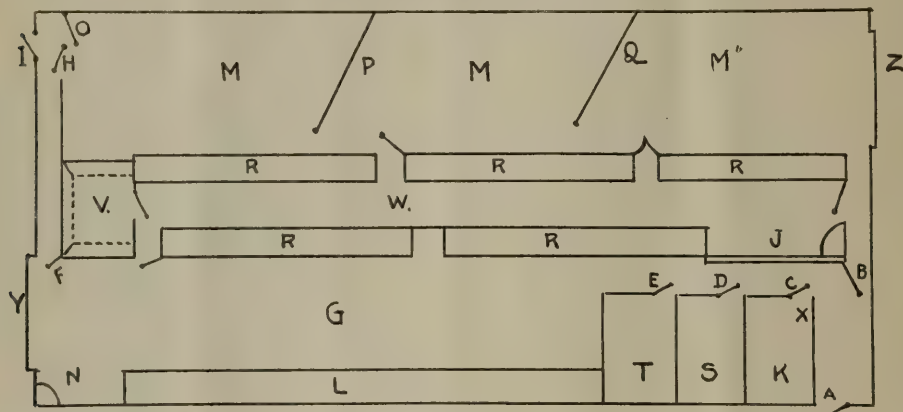
We arrived home all right with 312 Angora does and a carload of Mexican burros and ponies for the ranch. I brought back a Mexican cowboy and goat herder, who is a practical all-round stock man. We were on the road nearly eighteen days from New Mexico to Rock Castle. We have 50 does bred to Kingston Lad, and the rest are all bred to kids of his get. We expect to have the Angora men of the South meet up here in the latter part of April, and would be very pleased to have you come up with them and look over our ranch. I think that we now have the finest lot of Angoras in the South, and we would be glad to have any Angora men come over and look into our pens and corrals. I am enclosing you some

pictures of the Angora Goat Range in New Mexico. These pictures show plainly the very marked difference in our Virginia ideal goat paradise and the scattered brush of New Mexico and the far Southwest, where thousands of people are making a fine living and a great many becoming very wealthy on goat land that is not one-third as good goat range as ours in Virginia. I hope you will be able to get these

pictures into your April issue, so the people in Virginia can wake up and see what they are letting pass by without even making an effort to gather the golden harvest that lies at their feet. M. S. VALENTINE.

Rock Castle, Va.

We regret that we were unable to reproduce the pictures referred to. They were too indistinct for us to get halftones from.—Ed.



GROUND PLAN OF A CONVENIENT SHEEP BARN FOR BREEDING EWES.

Editor Southern Planter:

In the last issue of the SOUTHERN PLANTER I spoke of feeding ewes in sections, and promised to show a barn suitable for this purpose. Well, here it is. It is the plan that has been slowly evolving on Edgewood Farm for fifteen years. We will soon have it completed. It gets a little better every year. The latest improvement is the combination feed racks that were devised by my brother, Houston Arbuckle. These are shown by cuts elsewhere in this issue. I do not hesitate to say that these are the most convenient and most satisfactory racks that I have ever seen for feeding ewes that have lambs. No trampling of hay by the lambs, no soiling of feed troughs, no more fighting of sheep out of the feed bucket, no more irregular feeding of the flock. I think the plan of the sheep barn is clear, but if you will follow me I will run over the plan with you. The sheep are always admitted at door "A." P and Q, on the upper side, are fastened back against the wall; doors C, D and E are closed, and the sheep have access to both sides of the shed. If you are handling ewes for early lambs a division of the ewes must be made shortly after stabling them. Let us suppose we are in the

middle of the winter and it is time to bring the ewe flock in in the evening. We go to the barn and tell our faithful Collie to go after the sheep. (If you have a gentle sheep dog, there is no better way of handling sheep and it saves one many steps, but a rough, stubborn, yelping dog should never be used about the ewes that are lambing. We fortunately have the right kind at Edgewood. We are lucky.) I take my position at X in pen K. I have placed the dividing door B in position, and hold a rod that is fastened to the top of it by a movable joint in my right hand. Near my left hand, resting on the frame of the pen in which I stand are three rods that work the gates C, D and E. The gates C, D, and E are always kept closed except when opened to admit a ewe. Well, the ewes are coming in, taking their time about it, as ewes heavy in lambs always do, if they are not frightened or excited. A good shepherd never wants his ewes excited, and he wants to handle them as little as possible. The most important thing about this shed is that the ewes may be divided into sections without catching a sheep. It is supposed that you know every ewe in the flock. If you don't you have no business handling a pure-bred flock, and I doubt if you will succeed with any. I let the ewes pass into the upper side, until one appears that I expect to

lamb in a few days. I turn her to the left and push open gate D, closing it quickly behind her. At the same time I am watching the flock closely. If necessary, I can stop them by moving gate B to and fro in front of them. Next a ewe that has been off food or otherwise complaining appears. I turn her to the left and push open gate C, admitting her to the hospital. Along towards the last two or three ewes with young lambs are forced to pass on into the lower side, G. As the flock on the upper side diminishes, I shut gate P and pass some of the ewes with lambs by gate F and the passageway beyond to pen M on the upper side. As far as possible I try to work the ewes that have twins around to this pen, so that I can feed them a little stronger than the other ewes with lambs. A lamb creep should be provided in pen M as in pen G. It is not shown in the diagram. Thus without catching the ewes, it is easy to divide your flock into five sections, and you are thus permitted to feed them intelligently. If you have a few ewes that are mean keepers and will not feed well with the flock, you can work them into these pens and tempt them to eat by trying different feeds. The hospital pen is needed in every flock. Rarely does a week pass that there is not some ewe complaining. She should be off to herself, where she may enjoy quiet and where you can feed her properly and can easily give her the medicine that she needs. The secret of saving your ewes, is to notice the *first signs of sickness*. After a sheep has gotten entirely off feed and down in spirits, you stand little chance of pulling her through. A shepherd must have a quick eye to see complaining sheep.

A few other things about the barn are worth mentioning. Openings are left between all the pens on the lower side, so that the lambs may get to their mothers without having to be caught. They will soon learn those openings and will always find their mothers, except when they are two or three days old. L is a lamb creep, in which feed is always kept for the little chaps. N is a salt box, where the ewes may always find salt. Y and Z are large sliding doors that admit a wagon for cleaning the shed. V is a feed room, in which are found grain bins for oats, bran, oil meal and corn. This feed room opens into the passage W, from which you can conveniently pour feed into the racks with no sheep to bother you. The feed is mixed right in the feed room to suit the various needs of the flock. I strongly advise against using one mixture, I care not how good it is. It prevents you from using variety in your feeding, which is essential and no mixture can suit all cases in a breeding flock. Hay is passed down from the

mow above into the passage W, and is then easily put into the racks without getting dust and hay chaff into the fleeces of your sheep. J is a root cutting room. In one corner of this is a stairway leading down into a root cellar. We have not this last in our barn, but it comes next year. We are tired of lugging big rutabagas from outside.

Just one thing more. Oftentimes you want to separate the ewes from the lambs and you don't care to be catching the lambs and having them kick the stuffing out of you. Bring your flock into G. Let one man stand at dividing gate H, closing gate O. Another man or your dog may now drive the flock through gate F, and in a few minutes every lamb will be in the pen M, and every ewe will have passed through gate I to a lot outside. I think you will find some such barn very convenient.

Maxwellton, Va.

H. B. ARBUCKLE.

THE LAMB CROP IN VIRGINIA AND ADJOINING STATES.

Editor Southern Planter:

After travelling over a large part of Virginia, and from reliable advices from Kentucky and West Virginia, I have come to the conclusion that the shortage in the present lamb crop will be fully $33\frac{1}{3}$ per cent.—a great loss, indeed. In some flocks the loss is enormous—as high as 80 to 90 per cent.—and some flocks of 100 ewes having left only from 5 to 8 lambs. In each and every case, the reason for this terrible death rate is practically the same—viz.: After the ewe has dropped her lamb she has immediately turned away and left it to die. Why is this? Many blame it to the severity of the past winter, and *indirectly* this is undoubtedly the cause.

I say "indirectly" because directly it is the owner's failure to give the proper care to the ewe, not only at lambing time, but for a few weeks previous. To be successful with sheep, you must provide for them when cold weather does come, and not leave them to hustle for themselves.

Every one knows how absolutely barren the pastures have been of any grass or green food of any kind during the past winter. Fields that usually afford some picking during the cold months, were as free from such as a plank floor. Under these circumstances green food of some character—succulent food—food that will tend to produce milk, must be provided or loss must occur. Nine times out of ten, unless a ewe has a good, rich flow of milk, a good bag, at her lambing time she will not give any attention to her lamb, and will invariably turn away and

leave it to die. She cannot have this milk without succulent food be fed to her for some time before she lambs. Turnips or beets grown and kept for the winter and fed daily would obviate much of the loss. Farmers who will take this slight precaution will realize great returns from their labors. Don't get discouraged, but try this plan another year and see what difference it will make.

R. C. B.

HAY AND GRAIN RACK FOR SHEEP COMBINED.

Editor Southern Planter:

There are many forms of sheep racks, all of which have some good features, but very few combined racks are without objections. I have succeeded this year in making a rack which has proven very satisfactory. As far as I know, this rack has never been described. Some one else may have hit upon the same idea, but, if so, I do not know of it. I will give the readers of the SOUTHERN PLANTER a brief description of it, hoping it may prove as convenient to them as it has to me. I will present it by cuts, numbered 1 and 2.

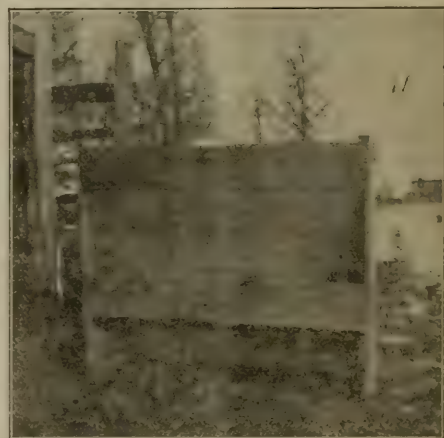
First, the lumber should be of light stuff, sawed in 1x8, 1x6, and 1x3 pieces. The rack from the ground is 45 inches high. The first thing to make is the ends. To do this take two six inch planks and one eight inch plank; place these three together, having them even at one end; the outside six inch plank mark 45 inches long; the next six inch plank mark 35 inches long and draw a mark from the rear side of the second six inch plank to the extreme outside.



Cut No. 1. Lay aside the long ends that you have sawed and you have the correct slope for the next

end. Now nail the three pieces together and you have the end 20 inches wide at the top and six inches wide at the bottom. You now join to this the foot for the feed trough, which can be plainly seen in Cut No. 1. This should be 9 inches wide and 10 inches high, which joined to the six inches of the end piece makes the bottom of the rack at the end 15 inches wide. After you have gotten two ends made fasten them together with 1x3 slats, one at the top and the other six inches above the foot. These slats can be plainly seen from Cut No. 1. Nail the front slats to these, leaving a crack of about three inches between them. This makes the hay rack.

Now place an eight inch plank on the foot for the bottom of the feed trough. The front is about completed now, so we will go to the back. First, observe



Cut No. 2. On the back edges of the two ends, 21 inches from the ground, nail an eight inch board. This you can see in the cut. From within an inch of the top of this plank slope a fourteen inch plank, made of half inch stuff down to within six inches of the front edge of the plank that forms the bottom of feed trough. The edge of this sloping plank can be seen in Cut No. 1, just under the lower cross-piece. For this I used two seven inch planks, and they answer just as well. This plank should be planed, because it carries the grain into the trough from the back of the rack. Notice how the back of the rack is made for this purpose. Here is the strong point of the rack. No hitting sheep over the head with a stick to keep them out of the feed bucket, when you feed from behind the rack, and probably it will save a few Sunday school words, if you are feeling very

wild and hungry sheep. When you are feeding Dorsets, you wont get your breeches torn off with their horns. In feeding grain in this rack you do not have to clean the hay out, which is a great saving of hay and a great convenience. Just clean the troughs and you are ready to feed grain at any hour of the day, and the racks may be filled with hay. I think any one can see from the Cut No. 2 how the back is boarded up, so I will not stop to describe it.

This rack has been a source of great comfort to me this past winter, and I hope your readers will get as much pleasure from it as I have.

Maxwellton, W. Va.

H. B. ARBUCKLE.

WOUNDS—THEIR CLASSIFICATION AND TREATMENT.

Editor Southern Planter:

As a fracture is defined to be a solution of continuity of bone, so a wound may be said to be a solution of continuity of soft tissue. Wounds may be classed under two great heads—surgical and accidental. With the latter it is the writer's intention to deal. According to their character, wounds are classified under the following heads—incised, punctured, lacerated, contused, gunshot and poisoned. An incised wound is one that is made with a clean cutting instrument, the parts are divided smoothly and evenly, with no tearing or bruising of surrounding tissue, and where blood vessels of any size are divided the hæmorrhage is usually great at first, perhaps greater than from any other method by which wounds are made. If the wound is parallel with the course of the muscles, there is little or no gaping of the orifice, but if the cut runs across the body of the muscle or muscles, it then presents a very different aspect, the irritating influence of the air, dust, etc., coming in contact with the sensitive, exposed muscular tissue, causing contraction, and a drawing apart of the lips of the wound, frequently forming pockets in the deep seated tissue in which blood, foreign substances and pus are apt to collect and retard healing. The treatment of this sort of wound is usually simple if taken promptly in hand after the accident, or before it has become contaminated with foreign substances, dust and influences which tend to retard the process of repair. First, bleeding, if excessive, should be arrested: if large vessels have been severed and the blood spurts or flows in a stream, such vessels should be secured at their bleeding end and ligatured, preferably with silk, but cotton or linen thread answers very well. Whichever is employed, must be thoroughly disinfected prior to its introduction into the wound, as must all instruments, hands of operators or attendants. In order to successfully ligate bleeding vessels, a small pair of forceps are required with

which to draw such vessels within reach. No more thread being left in the wound than is necessary to attain the desired end. From smaller vessels bleeding may successfully be checked by moderate pressure, preferably with clean cloths rung out of cold water or ice packed around the parts to cause contraction of the open mouths of the vessels. Astringents also form a useful part of the operation here, such as alum, borax or tannic acid in solution, but in no case should such substances as earth, puff balls, etc., be employed to arrest hæmorrhage, as they carry with them in many cases the vilest contamination with which it is possible to infect not only the wound, but the whole system, and many simple cases are thus complicated, with results which, if not fatal, render the animal subject to much unnecessary suffering and unsightly blemishes. As soon as bleeding has been successfully checked, the parts should then be thoroughly cleaned of all foreign substances. This requires careful handling and judgment. Clean water, which has been previously boiled and to which has been added proper antiseptics, are to be employed, all undue pressure must be avoided, as all injured tissues must be gotten rid of, either by absorption, or discharged. Blood clots, foreign substances, etc., having been removed and the surrounding skin thoroughly cleansed, the parts are now ready to be drawn together. Bandages may be successfully employed about the extremities, in simple cases, where the cut does not gape, but the majority of cases require suturing. Several methods of suturing are employed in surgery, but the old, interrupted suture has much in its favor, and is easily applied. Stitches, preferably of disinfected silk or linen twine, are placed through at regular intervals of from three-fourths to one and one-quarter inches apart, and the edges are evenly secured throughout the entire length excepting at the extreme lowest point, which should be left open for the escape of discharges. The entire parts should then be protected by clean cloths, thoroughly disinfected and kept moist with a suitable solution to maintain a perfect aseptic condition. The wound should be cleansed and disinfected once or twice daily, according to its extent, or sufficient to control inflammation. Where pockets are formed during or after the accident these should be opened at their most dependent parts and all accumulations removed. An incised wound properly treated should heal in from twelve to fifteen days without inflammation or the formation of pus.

JOHN SPENCER.

Professor Veterinary Science.

Experiment Station, Blacksburg, Va.

(To be continued.)

In writing to advertisers, mention **PLANTER**.

The Poultry Yard.

POULTRY NOTES.

Editor Southern Planter:

April is the month to lay your plans for new laid Thanksgiving eggs. Chicks hatched during April, if well cared for and fed, will begin to lay by the latter part of October, and can then be kept laying during the entire fall and winter. Do not crowd them too much early in the season, but keep them free from lice, mites and disease, and keep them growing. Give them all the range possible, and feed them good, sound grain. Do not feed them soft feed after they can get plenty of grass. Give them a feed of wheat in the morning, not a full feed, but enough to keep them growing, and cracked corn, and later whole corn in the evening. I like to give them a full feed in the evening, but want them to imagine that they are hungry all day. Be sure that they have clean, fresh water all the time. An excellent device for this purpose is to have a small barrel or keg and fit a faucet into the end and a tight plug into the bung hole. Make a V shaped trough 6 or 8 feet long and cover it with a board cover hinged with hinges to one side of the trough. Bore two inch holes into this cover 6 inches apart along each side of this cover, and one in the middle at one end. Place this trough in a shady place and place the keg at the end with the faucet so arranged that the lower end of it will be about one-fourth of an inch below the level of the top of the cover board. Fill the keg and plug it tight so no air can get in. Open the faucet and if you have it set right, the keg and trough, the air will enter at the faucet and let the water gurgle out until the water will rise in the trough till it reaches the faucet, when it will stop. As soon as a few drops are drunk out air will again enter, and the trough will be kept full as long as there is water in the keg. In this way it will be kept clean and fresh. The water should rise in the holes to near the top. Sell all surplus cockerels as soon as they weigh 24 to 30 ounces, and any that may be wanted for breeding purposes should be kept separate from the flock in a roomy, shady yard, and kept in good, thrifty condition.

The laying hens must have good care now. In the hurry of spring work we are apt to neglect some of the necessary details. Feed regularly, keep their quarters reasonably clean, keep them free from lice and mites by using the carbolic-kerosene mixture as recommended last month; have plenty of good, clean, dark nests for them, keep them quiet and busy. Remove broody hens not wanted for setting to a cool

coop or jail, as we call it, as soon as they are found on the nests at dusk, feed them well in this coop for three or four days, and they will lay in six to eight days. If allowed to remain on the nest 48 hours, they will not lay in less than 20 to 30 days. Do not try to mix hens with flower beds or the family garden. They mix too much. The best and most satisfactory way to provide shade for hens and chicks is to plant artichokes along one side of the yards. These grow quickly and furnish excellent shade at the time when most needed. This also gives them fresh earth to scratch and wallow in, a most healthful exercise for them. The tubers also are relished by them. These contain very little nutriment, but are a good tonic to the fowls.

This is also the month to lay our plans and sow the various grains, grasses, etc., for summer and winter pasturage. The best and most satisfactory summer pasture we have ever had was a plat of ground 40 feet wide and 20 rods long. This was plowed and harrowed early in April, and the following amounts and varieties of seeds were sown in this plat. Five bushels winter rye, two bushels oats, two pounds Dwarf Essex rape, two pounds mustard seed and five pounds red clover seed. The rye and oats were sown, then harrowed in, after which the other seeds were sown and brushed in with a brush harrow. The fowls were not allowed to run on the plot until the rye and oats were about three inches high. This is very thick seeding, but it made a solid mat of green in a few weeks, and afforded splendid range for a flock of 200 hens for five months, after which they were kept off for two months, and it made a strong growth for winter range.

For early fall and winter pasture we plant corn, potatoes or some hoed crop near the poultry yards, and keep the land clean, mellow and level, then about July 25th we sow a mixture of rye, crimson clover, winter vetch, turnip seed and mustard. Sow it thick and work it into the soil with a smoothing harrow or harrow tooth cultivator. Keep the fowls off until it has made considerable growth, and it will afford plenty of green forage for winter. Plan to grow a variety of grains and seeds for the fowls for the grain ration. It is a great mistake to depend on corn alone. In addition to corn, we should have oats, wheat, millet, Kafir corn, sorghum, sunflowers, buckwheat and soja beans. I have never fed a more satisfactory protein feed than cracked soja beans. Good wheat bran contains about 12 per cent. digestible protein and 45 per cent. carbo-hydrates, with a

nutritive ration of 1-5-3, while soja beans contain nearly 30 per cent. protein (29-6) and 17 per cent. carbo-hydrates, and a nutritive ratio of 1-1-8; corn has but 7 to 10 per cent. protein, 63 per cent. carbo-hydrates, and a ratio of 1-10-3; oats, 9 per cent. protein, 44 carbo-hydrates, and a ratio of 1-5-9. It will be seen from this how valuable soja bean meal is in balancing the corn and oat ration for all farm animals, including fowls. Many acres of Virginia soil will produce profitable crops of soja beans, and practically no corn. Very much of the bran and ship-stuff in the market is adulterated with ground corn cobs, peanut hulls and other waste products of no value as food, and positively harmful to fowls. Virginia needs a food inspection law that would include all mill feeds and by-products, and needs it very badly. I have inspected several samples of these by-products. In addition to these grains and seeds, we should grow vegetables for them. Cabbage, sugar beets, carrots, rutabagas and turnips will all be helpful in keeping up the egg yield and thrift and vigor of the flock. These can all be fed in the raw state and whole.

By exercising forethought, and knowing the needs of your flock, everything necessary for their health and thrift can be grown on the farm, excepting a supply of green bone, oyster shell and the necessary insect, and lice killing compounds.

CAL. HUSSELMAN.

Richmond, Va., R. 6.

We would suggest that cow peas be added to the list of crops grown to provide grain for the fowls. These peas, like soy beans, are especially rich in protein, and make excellent egg producers. We had a report last year from a subscriber who let a patch of cow peas well podded near his poultry yard die down on the ground, and into this turned his fowls in the late fall and winter, and they laid more eggs than he had ever known a like number of fowls to lay during the winter.—Ed.

EGGS.

Editor Southern Planter:

De we live to eat, or do we eat to live? So long as we live we must eat, and generally so long as we eat we live. We do also believe that the food we eat gives form and caste to our life and character. The savage eats flesh, many times raw flesh. Is he a savage because of his flesh diet, or does this diet make him a savage? Civilized man demands a great variety of food, and generally of the best his means afford. He wants it palatable and clean. Is there

any food product more so than a good, fresh laid egg? An egg properly cooked is palatable, digestible and very nourishing. It is easily prepared, conveniently kept in good condition, and very acceptable to the hungry man. The good cook can quickly prepare them in many ways. They can be boiled, baked, fried, poached, scrambled, shirred, made into omelets, custards, puddings and pies. They are useful in the culinary art in a thousand ways. They are the rich man's delicacy, the poor man's comfort, the child's delight, the symbol of the life that is to be. Eight eggs contain as much nutriment as a pound of beefsteak, and are more easily digested. It is said that some beefsteak will give a Virginia hound the nightmare, while they have been known to eat a dozen eggs a day and grow slick and fat on them, and their dreams were simply for more eggs. The food consumed by the hen has much to do with the quality and flavor of the egg. Wheat, oats, grass and vegetables make pale watery eggs. A good feed once a day of good, sound, yellow corn and plenty of clean, sweet milk to drink make yellow, firm yolks and rich, albuminous whites. Sterile eggs are better, and will keep fresh and sweet longer than fertile eggs. Brown eggs have thicker shells than white ones, and will keep better. The thoughtful, frugal housewife will store a good supply of eggs when they are low in price to use when they are scarce and high. They can be kept in perfect condition for six months if they are sterile and fresh laid by the following method: Procure one pound of water glass and add to ten pounds of cold water, previously boiled. Select good, sound eggs, place them small end down in a clean, new stone jar, and cover them with the water glass solution. Put several thickness of heavy paper over the jar and tie tightly and put in a cool, dark place. When wanted rinse them in clean water, and you will find them in perfect condition to use for all purposes.

MRS. CAL HUSSELMAN.

Richmond, Va., R. 6.

Rape.

I would be glad to have you tell me if rape could be successfully grown in this county. My idea is to sow in corn at last working, to use as fall pasture for hogs. Would it be practicable? E. S. H.

Grayson Co., Va.

Rape can no doubt be successfully grown in your county either as a spring or fall crop. We have seen the experiment tried of sowing rape in the corn at the last working for a fall pasture, but it did not turn out very successfully, as the corn shaded the rape too much, and the growth was very small. This was in very tall corn. Probably if sown in some dwarf variety the rape might make headway, but it would be far better sown alone.—Ed.

The Horse.

NOTES.

In preparing copy for the stud advertisement of Valmont, owned by Mr. L. L. Wallace, of Amelia, Va., I inadvertently stated that the stallion was sired by Norwood instead of Prosper, the latter being the correct version of the breeding of the chestnut horse, on the paternal side. Valmont was bred by Pitts & Dorrier, of Scottsville, Va., whose stud is headed by Norwood, but Prosper stood nearby when the Northumberland mare, Jeanette, was bred to the latter in 1892, and as a result of the service Valmont was foaled in 1893, as the Stud Book shows. Valmont is a large, handsome horse, being 16.1 hands high, and weighing 1,200 pounds. Being by Prosper, one of the largest, handiest and best bred sons of imported Leamington, and tracing no less than three times through his dam, Jeanette, to Boston, sire of the mighty Lexington, Valmont should sire a great lot of hunters, jumpers and cross country horses, which are now so much sought after. Prince Henry, the stud companion of Valmont, is a son of Patronage, sire of Alix, 2.03½; dam, Hazel Eye, by Sir Walter, Jr., and a richly bred trotter, one that traces to a great line of ancestors, which fits him as a sire of harness horses.

Virginia Chief, the big black stallion by Kentucky Prince, from Nina, by Messenger Duroc, is the premier sire at Mr. W. N. Wilmer's Plain Dealing Farm, Scottsville, Va. The stud companions of Virginia Chief are his two handsome sons, Æbioneer and Plain Dealing, both of whom are rich chestnuts in color. The former is out of Æbina, by Alban, second dam Violet, dam of Version, 2.14½, etc., by Electioneer, while Plain Dealing had for a dam Barbara, a daughter of Alcantara, 2.23, one of the most famous sons of George Wilkes. Æbioneer and Plain Dealing are young horses, and comparatively untried in the stud, but Virginia Chief has shown his potency by siring show ring winners and fine harness horses that find ready sale. One of his get, the black gelding, Jessy W., from a hackney mare, was sold a few months back for \$500, while others have brought nice prices on the New York market. President Roosevelt has shipped a fine mare from Washington to be bred to Virginia Chief this season.

The horses are all doing well at Andrew Pollard's Dunraven Farm, which is some three miles out from Richmond, on the Newmarket road. Mostly harness horses are handled at Dunraven, and Mr. Pollard has a couple of handy assistants in his sons Edward V and Joseph A. Pollard. Mr. Pollard hails from Bownanville, Ontario, and these thrifty Canadians are well pleased with our Virginia climate and soil.

More than twenty horses were wintered at Dunraven, some of them being owned on the farm and others sent from different points. The Pollard lot includes Patrick Henry, chestnut colt, 3, by Squire Rickel, son of the hackney sire Cadot. Patrick Henry's dam is Margery, by Roseberry. Margery, now owned by Mr. A. D. Williams, of this city, figured well as a premium winner. A couple of handsome fillies, full sisters, are a chestnut, 2, and a black, 3, by Squire Rickel, dam a Morgan mare. Another good filly is a chestnut, 2 by the dead Aristocrat, dam Margery.

Mr. Andrew Pollard, of Dunraven Farm, has sold to Mr. A. D. Williams, the prize winning hackney mare, Margery, by Roseberry, with a brown colt at her side, foal of 1904, by Cherrywood, thoroughbred son of Eolus. The mare was bred in 1904 to Javenais, the French coach stallion by Agnadel, dam Rapide, formerly owned by Col. Barton H. Grundy, of this city. For Mr. Pollard Margery won the gold medal for best harness mare at the Ottawa Horse Show, and was also a winner at Toronto and other big shows.

BROAD ROCK.

Mr. Brady, of Albemarle county, Va., writes, as follows:

While reading your horse article, it occurred to me to write you about a horse of mine, for I do not think you can find a better bred one in the State than Albion Wilkes. He is the youngest son of the immortal George Wilkes, 519. His first dam Press Forward, by Albion, 2d dam, Belle Martin, by imp. Sovereign; 3d dam, Icara, by imp. Sarpidon; 4th dam, MillyLa ne, by Thornton's Rattler; 5th dam, by Potomac; 6th dam, by imp. Bedford; 7th dam, by Buffer; 8th dam, by imp. St. George; 9th dam, by Apollo.

It is quite useless to give George Wilkes' pedigree. He is so well known as one of the greatest of trotting sires. Albion Wilkes, 6793, foaled March 19, 1883, was bred by W. L. Simmons, of Lexington, Ky. He is a handsome dappled bay, very gentle and docile, is 15½ hands high. When a colt he was bought by Mr. Brockmeier, of Wheeling, W. Va. He became attached to the horse, and, as money was no object with him, kept this valuable animal for a driving horse. He was never tracked and little used for breeding. His full sister, Favorite, left a 2.20 record, and his full brother, Wheeling Wilkes, also owned by Mr. Brockmeier, was sold for ten thousand dollars, and then for thirty thousand. He came to me at Mr. Brockmeier's death, in 1898, and is still a strong, vigorous, young-looking horse. He has a lot of promising colts just coming into use here.

Albemarle Co., Va.

A. F. BRADY.

Questions and Answers.

Rape.

I would like to have a few hints from your readers in regard to the raising of rape for hog pasture, as I want to sow some this spring. The time to sow, how much seed per acre, and the kind of soil suited to it? Our soil is mainly stiff red clay, with a clay subsoil, naturally adapted to grasses such as red and white clover, timothy, orchard grass, red top and some blue grass.

Grayson Co., Va.

R. J. HALSEY.

Rape will grow on any fertile land, making the best crop on a medium loam soil. It should be sown either broadcast or in drills as early in the spring as possible, as in the South it cannot stand the hot weather of summer. It is a cold climate plant. Sow in March and April in your section, and it will probably last as a pasture until July, and should then be plowed up and the land put in some other crop. For a fall crop sow the rape in August for a pasture which will last until winter. If sown in drills the drills should be about three feet apart and the crop cultivated two or three times. About three pounds of seed will sow an acre in drill, or four or five pounds will sow the same acreage broadcast.—Ed.

Horses with Sore on Skin—Gum Sawdust.

1. I have two nice mares that break out nearly all over with sores when warm weather comes, and it seems to bother them very much as they are nibbling or biting themselves nearly all the time, and they lose their flesh. When the warm weather is gone they get over it and get fat again. Please tell me what to do for them.

2. I have about 5,000 or 10,000 cart loads of old rotten gum sawdust of which I will send you a sample. Please tell me the best way to dispose of it. How would it do to mix one bushel of lime with ten or twenty bushels of this dust and use it under cotton and corn? The land I thought to use it on will grow 1,200 or 1,500 pounds of seed cotton per acre now. Do you think it would pay to bother with it?

W. H. WILSON.

Norfolk Co., Va.

1. Your horses probably suffer from nervous itching of the skin caused by what is known as pruritus. The treatment consists in a purgative with rest and laxative diet, and a wash of water slightly soured with oil of vitrol and rendered sweet with carbolic acid. Give one pound of epsom salts as a purgative. If this treatment does not give relief give daily one ounce sulphur and twenty grains nux vomica. If the acid lotion fails two drams carbonate of potash, two grains cyanide of potassium in a quart of water will probably be effective.

2. Do not worry with the rotten gum sawdust, it is hardly worth the trouble of hauling on to the land for any benefit it will be. It is practically worthless as a fertilizer.—Ed.

Pigs Ailing.

I should be much obliged if any of your readers can tell me what is the trouble with my pigs. About two months after weaning they seem to get stove up just as if one had squashed them as broad as long. They will linger on in that state, eating heartily from one to three months, then suddenly die. The pigs from weaning are fed middlings, milk, and swill from house, also corn. During the last year I have lost about twenty all under six months old. The matured hogs are fed a great deal of distillery slop, but I find it does not do to feed young pigs, as it stunts them. I am now over forty, and have been amongst pigs

all my life, and have never seen anything like it before. I have stopped cholera in Tennessee, and occasionally in Northwest Iowa.

AN EXPERIMENTER.

Fairfax Co., Va.

We think the trouble with your pigs is caused by the feeding of the distillery slops to the sows. You admit that it stunts the growth of the young pigs when fed directly to them, and we believe that it is the cause indirectly of the condition you complain of after the pigs are weaned from the sows fed on the slops. Do not feed the slops to the sow when she is suckling pigs, and see what effect this has on the growth of the young pigs. We believe the distillery slops are at the root of all your trouble.—Ed.

Irish Potatoes.

I am working a farm located in Loudoun county, Va., which is known as Hog Back Mountain. We have a spot of land which was planted in Irish potatoes the last season, and I desire to put a small part of the same land in potatoes again the coming season. The land was covered thick with stable manure and five bushels of potatoes planted, and I only dug four and one-half bushels. Will you please say in your next issue when and how to plow this land, and also what kind of fertilizer to use to get the best results; and also where I can purchase the fertilizer, and what the cost will be?

SUBSCRIBER.

Loudoun Co., Va.

We certainly think you ought to find another piece of land on which to grow the Irish potatoes this year, after your experience last year in failing to get back the seed you planted. Irish potatoes require for their successful growth light loam soil full of vegetable matter and fertility. It is useless to plant the crop on poor land anywhere. Get your land rich enough to grow clover, then you can succeed in growing Irish potatoes. If you must grow the crop this year select the best piece of land you have and manure it heavily with farm manure, and then apply 100 pounds muriate potash to the acre, or if you have no manure, mix fertilizer in the following proportions: 300 pounds nitrate soda, 600 pounds cotton seed meal, 800 pounds acid phosphate, 300 pounds muriate potash to make a ton and apply at the rate of 500 to 1,000 pounds to the acre. You will find parties advertising these fertilizers in the *PLANTER*, or you can get them from fertilizer dealers in Baltimore.—Ed.

Corn Fertilizer.

I have two pieces of land I am going to plant in corn—one piece poor, deep, sandy, worn out land, the other black bay land, some of it a little grassy, all flat, but very well ditched. Please tell me what is the best fertilizer to use on this land. Am thinking of putting stable manure on the sandy land. Will it fire my corn, with acid and potash with it?

Marlboro Co., S. C.

HARRIS BRISTOW.

In this issue, in our article, Work for the Month, we have gone very fully into the question of fertilizer for the corn crop. To that article we refer you. We have no confidence in anything but stable manure for making a profitable return in the corn crop, though at the same time we know that lime applied early enough in the spring or winter will greatly help in securing a good yield, with profit on the outlay, but it is now too late to use lime to advantage on this year's crop.—Ed.

Alfalfa—Cow Peas.

I want to try an acre in alfalfa this year as an experiment, and would like to have your advice. My land is upland, clay loam of moderate fertility; in corn last year; clay subsoil, with natural drainage. I purpose to give it a light covering of stable manure (all I have), plow that under, then give an application of lime and harrow into soil.

1. In what month should I sow alfalfa here in the mountain section (Blue Ridge Plateau)?

2. How much seed to be sown per acre? I see this varies from 15 to 35 pounds per acre in articles I have read on the subject.)

3. Should I sow it alone, or with spring oats?

4. How deep should seed be put in? Will ordinary spike tooth harrow put them in too deep?

5. Is it advisable to use commercial fertilizer, in addition to the manure and lime, and what kind? I shall use the Agriculture Department culture on seed, and want to do everything possible to give the alfalfa a fair trial.

6. What variety of cow pea do you recommend for this section, and what fertilizer used with it, on same kind of land as above; and how many peas should be sown per acre broadcast, and in what month?

Grayson Co., Va.

W. S. HALE.

1. Sow the alfalfa in May.

2. Twenty or twenty-five pounds of seed to the acre is sufficient.

3. Sow alone.

4. Harrow the seed in with an ordinary spike tooth harrow.

5. We would apply four or five hundred pounds bone meal or Basic slag meal to the acre.

6. The Whip-poor-will pea should do well in your section for an improving crop, the New Era pea for a hay crop. If sown broadcast you should sow one bushel to the acre, if drilled one-half bushel will be sufficient. Three or four hundred pounds acid phosphate to the acre will be a good fertilizer. Sow the peas as soon as the land becomes warm in May.—Ed.

Hair Coming Off Sow—Onions in Land—Seeding Clover in Oats.

1. I have a Poland China sow, and she has an elegant coat of hair until she farrows, and when her pigs get about one week old the hair all comes off her sides. Please say in your next issue what is the cause?

2. What can I do with a lot I have full of onions? I want to work it in corn and follow it with alfalfa. It is stiff soil and rich.

3. What time should clover seed be sown for hay in oats seeded last fall, and now many seed to put to the acre, and should red top be sown with the clover for hay?

Richmond Co., Va.

R. B. MIDDLETON.

1. Sows very frequently loose their hair from both sides of the body when suckling little pigs. This is caused by the rubbing of the body on the ground when suckling. We know of no means to prevent this. Probably keeping plenty of straw in the pen will be about the best thing you can do.

2. Onions on land intended to be worked in corn will have no injurious effect upon the corn crop. It is one of the best crops for enabling the farmer to get rid of this pest, as constantly working the crop throws the bulbs to the surface, which will cause a large part of them to be killed. The only way we know of for getting rid of onions is to keep the land in cultivation for several years. You can neither smother them nor kill them by cutting them up. Digging them up is an endless task. Even cultivation, unless long continued, is only partially effective.

3. Clover seed should be sown immediately, and it would have been better sown in March. Red top may be sown with it. In this issue you will find an article dealing with the uncertainty of the clover crop when seeded in grain. We are strongly against this practice. Sow about eight or ten pounds to the acre with a bushel of red top.—Ee.

Dairying on a Small Farm.

Will it pay to keep five cows on a small farm of twenty-five acres, getting 20c. per pound for butter?

King and Queen Co., Va.

L. S. COURTNEY.

It ought to pay you to keep five cows on a small farm even though you get only 20c. per pound for the butter, but there is no reason why you should not get a better price than this if you make first class butter. In this issue you will find an article on dairying in Virginia, giving the experience of one of the most successful dairymen in the State.—Ed.

Macaroni Wheat.

1. Will you inform me in your next issue whether it will pay in my section to sow macaroni spring wheat. The land was a fairly heavy sod clay land, which I planted in corn last year, producing about eight barrels per acre. This land is located in the east central part of Carroll county. Do you think La Crosse, Wis., grown seed would be best for us to use. It is highly recommended, but I have learned that many falsehoods are published.

2. What kind of fertilizer do you think best for wheat and corn in this section. I have been using phosphoric acid and potash with fairly good results.

Carroll Co., Va.

L. A. LINDBERRY.

1. We have already in previous issues advised against the attempt to raise macaroni wheat in the South. We doubt very much whether it is adapted to this section, and certainly it should not be grown at present except experimentally.

2. Phosphoric acid is the dominating factor in producing both wheat and corn, and, therefore, ought to be liberally used where fertilizer is applied on these crops. In this issue you will find our views on fertilizer for the corn crop, and in a later issue we will write fully on the best fertilizer for wheat.—Ed.

Cotton Growing.

I have sixteen acres of old field pine land, from which I cut the brush and burned it, but did not burn the straw and surface, as my neighbors do. Now the straw is mixed into the surface, and all rotten. Last spring the cut-worms destroyed about one-fourth of the cotton on it after it was thinned out. It looked like it was ruined. I worked it well, put 100 pounds of 14 per cent. acid phosphate per acre. It produced about half a bale to the acre. I was thinking of not using any phosphate this year.

1. Will you advise me for the best?

2. Will it pay to use kainit to destroy worms and other insects?

WM. L. HARRIS.

Lincoln Co., N. C.

1. This land ought not to grow cotton again this year if you desire that it continue to improve and make profitable crops. You should put it in cow peas, applying 300 pounds acid phosphate to the acre. If, however, you must put it into cotton, use the fertilizer we advised for cotton growing in our February issue.

2. Kainit and all potash salts are useful in destroying cut worms and other insects in the soil. Kainit is usually the best to use on the cotton crop, as it prevents rust. We would apply some of it on the land.—Ed.

Age of Hogs—Sassafras.

1. Will you please state in your next issue how long hogs live. I have a sow seven years old. She has about ten pigs every litter. I would like to keep her as long as I can without her dying of old age.

2. Will sassafras with from four to six inches of heart make good fence post? X. Y. Z.

King William Co., Va.

1. We have no certain data as to how long a sow will live, as they are rarely permitted to die a natural death. We have known them to breed until they were over ten years old.

2. We are uninformed as to the durability of sassafras for fence posts. We would suppose from the density of the wood that if well seasoned before being used, such posts as you mention would last a considerable number of years.—Ed.

To Regulate Depth of Plowing—Angora Goats.

1. Will you kindly advise me as to best means of breaking my land a uniform depth? My land is hard in some parts of a field and light in others. With an ordinary plow I cannot regulate the depth. If I set the plow to plow the hard land, when getting to the light it will go down to the beam, or if set for the light it will run on top of the hard land. My land is all well drained, but most of it is so hard a few inches from top, no moisture can rise through to help the crop in case of drouth. How deep would you advise plowing?

2. Do Angora goats and sheep do well in same pasture? Will the goats fight the sheep or lambs? SUBSCRIBER.
Richmond Co., Va.

1. You should use a wheel or foot on your plow in order to regulate the depth. This should be attached to the beam just ahead of the share, and should be made so that it will not slip when pressed tight down upon the land, then set the plow to pull down into the land and you will have no difficulty in keeping the depth you desire unless the subsoil be very hard indeed. In that event it will be well not to try to go too deep into it with the turn plow, but to follow this with a subsoil plow or coulter to break the subsoil, thus enabling you to get more depth another year. Until you break this hard pan under your soil you will never succeed in making good crops. It is too late now to plow the soil much deeper than it has been turned before. This deep plowing should always be done in the fall and winter, when the subsoil turned up will be acted upon by the atmosphere for some months before the crop is planted and it thus becomes capable of giving up its plant food to the crops.

2. Sheep and goats may be pastured together in the same pasture, but they will rarely flock together, but each keep to themselves. Goats are not usually troublesome in fighting sheep and lambs.—Ed.

Pinetags.

I have quite recently purchased a farm in Chesterfield county that has been heavily manured for a number of years with stable manure that had pine needles in it for bedding. Does this kind of manure make the land sour. I have been cautioned to avoid all stable manure for fertilizer when pine tags (or needles) were used for bedding. Please inform me if such is a fact, and to what extent, and if it is so, can it be readily and economically remedied by the use of lime?

GRAYSON P. THORNTON.

Chesterfield Co., Va.

We do not think that the use of pine tags will in any

way tend to sour land when used alone or with farm-yard manure. They are of a resinous character, and are practically of no value as a fertilizer except in so far as they tend to make heavy land lighter. They are slow to decay when used alone, but if they have been mixed with manure will decay more readily, and will add some vegetable matter to the soil. Lime would greatly help in securing a good crop upon land treated as you describe this farm of yours. We have known land heavily manured with farm-yard manure for a number of years not to make as good a return in crops as it ought to do until lime had been applied to it, and then to respond wonderfully.—Ed.

Hog Crops.

Please tell me the best crop to plant for hogs to mature early.

B. A. FLEETWOOD.

Perquimans Co., N. C.

Canada peas and oats make the earliest grazing crop for hogs, but it is now too late to sow this crop in your section. They ought to have been got in in February. We do not suppose that you can do better now than to sow sorghum and cow peas or sorghum alone for grazing.—Ed.

Improving Land.

As I am a young farmer, and haven't had much experience in rotation of crops, I wish to ask your advice. That you may better understand me, I will tell you a little of my experience. I was raised here on the farm, but never took much interest in trying to improve it. Half way cultivating a field of corn with one horse, never making over fifteen bushels to the acre. Five years ago this coming spring I made up my mind that I would begin to improve my land, so I took ten acres (10) to start with. I bought fifteen bushels black cow peas and sowed and plowed them in, sowing broadcast 200 pounds of 10-2 fertilizer. The summer was very dry; the peas didn't do much. That fall I sowed the piece down in wheat with about 300 pounds of the same fertilizer; harvesting a very poor crop. Very much discouraged, I didn't do anything to the land until the next spring. I sowed it down in peas again, without any fertilizer; had a very good growth, and the pods were full of peas. I cut them with a mower while the dew was on. After the dew was off I gleaned them up, and thrashed them out on a rack. It was getting late in the fall, and I wanted to seed wheat. I sowed the wheat on the pea stubble, putting it in with a disk harrow (I had bought another horse and disk harrow by this time), applying 400 pounds 10-2 fertilizer to the acre, had a fine growth of straw, but not much wheat (only getting seven or eight bushels to the acre). I let it lay idle until last spring. I plowed it as deep as the soil would allow. I put it in fine order and planted corn. In August I sowed it down in crimson clover, getting a very good stand. When I gathered corn I measured 75 barrels. This encouraged me a little. Now, I want your advice what to do next. My idea is to cut three acres for hay and plow the rest under, running a harrow over it at intervals to keep the grass down, and seed it down in red top clover. It is a light loam, with a sandy clay subsoil, from six to fifteen inches below the surface. I have another plat of ten acres, which I have started to improve. Sowed peas last summer, and have wheat and oats on it now (five acres each), which is looking very sick at present. Don't think I will get enough off the land to pay me for breaking it up. I put it in thorough order by plowing deep, disking twice, drag harrowed and rolled; then put in with a Farmers' Favorite drill, with 400 pounds 12 per cent. acid phosphate. As I will not have time to put in over ten acres of cow peas (for I do all my work myself), should I sow them where I have wheat and follow with corn, or should I sow them on the crimson clover fallow. I have four fields of ten acres each. I have at present one in crimson clover, one in wheat and oats, one for corn this spring, one for pasture. The land is poor, and

I am in very limited circumstances. I would like for you to advise me as to the most economical way to improve it.

2. As there is no veterinarian here I would like to ask your advice about a colt. It stuck a stick or end of a rail in its right breast near wind pipe (just about where the collar should work or breast strap) large enough for me to run two of my fingers in. I could not find anything in the wound, it healed up very quickly, yet he sweats on the left side, from the top of his neck down to his fore leg. The place that gets wet is about eight or ten inches wide. He does not seem to have any pain or fever. I have shown him to a good many, but no one seem to know the cause of the sweat.

3. What is the best fertilizer for yam potatoes?

King and Queen Co., Va.

YOUNG FARMER.

1. What your land most needs to make it responsive to applications of fertilizer and good cultivation is the growing of leguminous crops like cow peas and clover. It will be well for you to turn at least one crop of the legumes under instead of cutting for hay. This adds vegetable matter to the soil, which cannot be improved as cheaply any other way. You ought to follow the crimson clover and also the wheat and oats with peas. The crimson clover land, if sown in peas and cut for hay, would probably, with the help of some acid phosphate, make a stand of red clover seeded in September without a grain crop. On the wheat and oat land the peas should be turned under and followed with crimson clover. Instead of buying mixed fertilizers of as low a grade as 10-2 buy acid phosphate alone and apply three or four hundred pounds to the acre.

2. We are unable to explain the reason for the place on the colt's breast sweating as you describe it, if there be no fever there. It is possible that there may be some foreign substance in the wound, but if so, there would be some fever, and it is our impression that this is the cause of the trouble. Possibly this may pass off after a time without the necessity for opening the wound to examine it for the foreign substance. We would wait and see.

3. For the yam potatoes use a fertilizer made up of 100 pounds nitrate of soda, 500 pounds cotton seed meal, 100 pounds acid phosphate and 300 pounds muriate of potash to make a ton. Use about 400 pounds to the acre.—Ep.

Seed Corn for Improving Size of Ears.

1. Please let me know the best corn to mix with "Maryland Twin" so as to give size and quantity. I have the genuine Maryland Twin, but think the ears too small, and wish to enlarge same, and at same time have a twin corn.

2. Also let me know if acid phosphate is a good manure for my garden.

G. G. TAYLOR.

Mecklenburg Co., Va.

1. Try Holt's Strawberry, Eureka or Blount's Prolific.

2. Yes, your garden will no doubt be improved by the addition of acid phosphate, but you should also use muriate of potash, which is very essential in vegetable growing and some nitrogen in the shape of nitrate of soda and cotton seed meal.

Restoring Fertility on a River Farm—To Ascertain the Need of Lime—Applying Lime—As to the Need of Commercial Fertilizer on a New Farm.

I have a fertile river farm, which has never grown anything but corn since it was cleared, more than sixty years ago. The first bottoms, which are subject to annual overflow, yield 50 to 60 bushels to the acre yet. The second

bottoms, which are reached by high water only at intervals of fifteen or twenty years, are much depleted.

I have just taken hold of the place, and wish to build it up as quickly as possible, and, if it can be done without loss of revenue from the land during the process of improvement. There are about 500 acres in cultivation, and two-thirds of this can safely go in corn again this year.

Kindly outline a plan of rotation for the whole farm, as it all needs rest from corn.

1. Will oats sown in March, with red clover and timothy or herd's grass, be as profitable a crop on the second bottoms as the sixteen to twenty bushels of corn it will yield?

2. Will cow peas sown in corn at last plowing, in heavy first bottom lands be of much benefit, or should this be done only in the lighter soils?

3. How can one ascertain if a soil needs lime?

4. If lime be applied to a soil that is not deficient in lime, is there not danger of injury to the land?

5. Is ground limestone preferable to air-slacked lime, and in what quantity should it be applied?

6. Is Tennessee phosphate rock as good and as economical as other forms of phosphorus?

7. Does naturally fertile soil, such as I have described, require commercial fertilizers to restore it from the abuse of constant corn cropping? Would restoration be accomplished through intelligent rotation with legumes?

NEW READER.

On the bottom land subject to annual overflow it is difficult to establish a rotation of crops on account of the annual floods. Any crop standing on the land during the winter would almost certainly be ruined frequently by the flood; therefore, on this part of the farm we would continue the growth of corn and would sow peas at an interval of a year or two among the corn, which will aid in maintaining the fertility. On the second bottom a rotation of corn, peas, clover and timothy should be established. This rotation will add to the fertility of the soil and eventually will make it as productive as any other part of the farm.

1. If spring oats succeed well in your section probably they will be as profitable as corn on these second bottoms, but if as is the case in this section of the State, spring oats are an uncertain crop, we would seed grass and clover, thus ensuring a good stand, from which probably one crop could be cut the first year and two crops the year following.

2. Yes; the cow peas will no doubt benefit both the heavy and light soil.

3. A chemical test for ascertaining the need of lime is the use of litmus paper, which can be obtained from a drug store. A spade full of the soil should be lifted from the field when wet. A piece of the litmus paper to be applied to it when the blue paper will turn red if the soil be acid. Of course, if the acidity be only small, the test will not show very strongly, but yet the acidity may be sufficient to prevent the best results in securing the leguminous crops. Many soils which show a very slight action on the litmus paper yet need lime in a small quantity for the best results. Practical tests of the soil by using lime at the rate of 10 to 20 bushels to the acre on a small plot will give more positive information as to the needs of the soil than a chemical test.

4. We have never known of an injury being done to any soil by the application of lime. Even where the soil is on a limestone formation, we have known lime to be applied in considerable quantity with very considerable benefit. Recently a gentleman wrote us from Pennsylvania that his farm was on limestone, yet that every year he took the

rocks from the land and burnt them in a kiln on the land and applied freely the burnt lime to the soil with the greatest benefit.

5. We have seen several reports recently of good success secured by the use of ground limestone in the place of burnt lime. Personally, however, we have always used freely the burnt lime.

6. So far as we are able to judge from the reports we have seen, the Tennessee phosphate rock is as good and as economical as the other phosphate rock. When treated with sulphuric acid the phosphoric acid in the rock is just as available and just as good for crops as the phosphoric acid obtained from other sources and is practically the same.

7. Naturally fertile soil, such as you describe, may be restored to its full productive capacity without the use of any commercial fertilizer simply by good plowing and perfect cultivation and a proper system of rotation of crops. We know one place in this State, a large farm, which a few years ago was practically unproductive, which now produces heavy crops, and has never had a pound of commercial fertilizer on it.—Ed.

Lincoln, Cheviot and Oxford Down Sheep.

Where can I get sheep of these different breeds.

Amherst Co., Va.

W. A. RICHESON, M. D.

We do not know that either Lincolns or Cheviots have ever been kept in this State. Write Bert Smith, Secretary National Lincoln Association, Charlotte, Mich., as to the nearest point where you can get this breed. For the Cheviots, write W. H. Keim, Secretary Cheviot Association, Ladoga, Ind., for the nearest breeders. The Melrose Stock Farm, Cassanova, Va., have advertised Oxford Downs in the PLANTER.—Ed.

Seeding to Grass.

Will you please give me some information on the following questions: I have a lot that was planted in corn last year, and wish to get it down in clover this fall. The land is red soil, and some places thin. How would it do to sow in peas? What times to sow? When to fallow? What fertilizer to use, and how much to acre? *Mt. Cross, Va.*

Sow cow peas in May, applying 300 pounds of acid phosphate per acre. Cut for hay in August. Then plow and apply twenty-five bushels of lime per acre and work to a fine seed bed. Apply 200 pounds of bone meal per acre, and sow the clover in August or September without a grain crop.—Ed.

Cow Peas—Soy Beans—Lime—Grass for Wood Land, Etc.

1. I have been trying for several years to raise cow peas and soy beans, but they have proved a failure with me. The first year was the best crop I have raised, and each succeeding year grew worse, and last year was a failure. I have sown the same land each year. Last year I mixed vetches and rape seed, and it all failed. Can you tell me what was wrong?

2. When you speak of applying so many bushels of lime do you mean by measure or weight? If by weight, how many pounds in a bushel?

3. Is the agricultural lime that has been prepared by a patent process any better for land than that just from the kiln?

4. Where can I get lime from the kiln. I have asked through the PLANTER for ads., but find none.

5. How much of the bacteria will the Department at Washington send to one man?

6. What is the best grass or clover to sow in woodland for pasture?

7. In the absence of a subsoil plow, which is better to follow the turning plow, a bull tongue plow or a coulter?

Putnam Co., W. Va.

C. M. FARBA.

1. The failure of the cow peas and soy beans must arise from the absence of the necessary bacteria in the soil. Usually cow peas carry sufficient bacteria on the seed to ensure inoculation of the land, but as your second and later crops were worse than the first, it is evident the bacteria does not persist in your soil. This must arise from an acid condition of the soil, indicating that lime is needed. Cow peas and all the legumes require also that there shall be plenty of available phosphoric acid and potash in the soil in order to their success. They will get the nitrogen they need from the atmosphere, but must have these mineral fertilizers supplied unless they are abundant and available in the soil. We would presume that there is considerable phosphoric acid and potash in your soil, but it is evidently not very available. We would apply 25 bushels of lime per acre. This would correct acidity and make available the potash and phosphoric acid. It would be well also to give an application of 300 pounds to the acre of acid phosphate with the next seeding of cow peas and soy beans.

2. We mean bushels by weight. The standard weight of lime here is 80 pounds per bushel.

3. No. Experiments made at one of the Experiment Stations, in Ohio so far as our memory serves, go to show no advantage possessed by this patent process lime over lime fresh from the kiln.

4. We could tell you where to get lime in this State, but it would not be of help to you, as you could not afford to ship it to West Virginia. You surely must have plenty of lime kilns in your State. We know that in Ohio, just across from your State, they supply lime both fresh burnt and ground. Make enquiry locally.

5. We do not know what is the limit, but understand they act liberally in the matter.

6. Wood meadow grass and the various fescue grasses and the native Virginia blue grass with some white clover and Japan clover.

7. A bull tongue plow will break the subsoil more completely than a coulter.—Ed.

Cabbage Worm—Hog Pasture—Cost of Ensilage—Preserving Eggs.

1. Is there a reliable remedy for the cabbage worm? Is it safe to use Paris green for it?

2. What could I sow to make a succession of hog pastures this summer? How would Canada peas and oats followed by sorghum, Kaffir corn, cow peas and millet do? What makes the best permanent hog pasture? The land I must use is a gravelly, clayish soil. What fertilizers should I use on it?

3. For how much per ton can ensilage be grown and put in the silo?

4. Can you give me a good method for preserving eggs?

W. E. G.

1. See the Spray Calendar in March issue. Paris green may be safely used before the head begins to form, but never after.

2. Canada peas and oats and rape for first crops to feed up to June. Sorghum, cow peas, soy beans, Kaffir corn and

corn, to follow this up to fall and artichokes for winter. Pumpkins also and sweet potatoes are useful as a change in the summer and early fall, and peanuts where they succeed. The only permanent hog pastures are Bermuda grass for summer and crimson clover with wheat, oats and rye mixed with it for winter and spring grazing. Acid phosphate is what you mainly need to produce these crops with a top dressing of nitrate of soda to force the growth in the spring.

3. About \$1 per ton. It has been done for less.—Ed.

Seventeen Year Locusts.

I wish to plant a large orchard in the near future, but am afraid of the locust pest. Please tell me how to protect my trees from them. Will any kind of spraying prevent them from stinging young branches?

Shenandoah Co., Va.

J. T. KELLY, M. D.

The 17 year locusts are the ones we presume you refer to. Whilst these insects really do not do very much damage to orchards, as they only pierce the ends of the twigs and cause them to drop off, yet it is not wise to plant a new orchard in any section in the year or the preceding year when a brood of these locusts is due there, as they cause some check to the growth and cannot be easily protected against. The proper course to take is to write the Department of Agriculture at Washington to ascertain when a brood is due to appear in the section, and arrange the planting accordingly. They regularly appear every seventeenth year, and never in intermediate years in the same section.—Ed.

Fertilizer for Winter Oats—Peanut Fertilizer—Fertilizer for Corn—Book on Diseases of Stock.

1. I sowed a patch of Virginia grey winter oats on 31st of last October, and have a good stand. I aimed to have top dressed them with manure from the cow stall, but pressure of other work prevented. Will it pay to apply it now this late in winter or will some good commercial fertilizer do better applied about March 1st and put the cow manure on the land intended for corn?

2. In mixing a fertilizer for peanuts, say of 1,000 pounds acid phosphate, 300 pounds muriate potash, and 300 pounds ground fish and 200 pounds bone meal, raw, to make a ton with the remainder in pounds made up of make weight. Would you advise the use of muriate instead of sulphate, the muriate costs \$4.50 less per ton than sulphate; 400 pounds of the above to be applied to the acre, and is it better to apply it broadcast or in drill? I have used kainit instead of the higher grades of potash in drill, and had much trouble by seed being killed.

3. I notice you always advise against the use of commercial fertilizer on corn, while here in Tidewater Virginia it is the rule. We mix our fertilizers with the chemicals bought in large lots through our Farmer's Club. We use kainit instead of the higher grades of potash for corn, as it seems to be the best remedy against the bud worm. Do you think that the muriate or sulphate would have the same effect in preventing the bud worm? Commercial fertilizer seems to double the yield of corn. Now are we groping in the dark since we must have the corn in sufficient quantities to keep the team and other farm animals?

4. Where can I get a treatise on veterinary surgery and diseases common to stock? As we frequently need information along this line and there is not a professional man in the county?

Nansemond Co., Va.

J. L. HARE.

1. Give a top dressing of nitrate of soda, 100 pounds to the acre, as soon as the oats commence to grow freely. It is too late to use the cow stall manure to best advantage. This will pay better on the corn.

2. You can safely use the muriate of potash instead of the sulphate for peanuts, and with as good results. We would apply 400 pounds to the acre broadcast, as there is danger when using so much in the drill of injuring the germ of the seed with the caustic properties in the fertilizer.

3. In this issue you will find much advice and reports of results on the use of fertilizer on corn. We know that it is possible to largely increase the yield of the corn crop by the use of fertilizer, but we have rarely known this to be done profitably. Deep and perfect preparation of the land before planting the corn, the use of barn-yard manure on the land, and level cultivation of the crop are the secrets of successful and profitable production. All the forms of potash are repellants of insect damage to the crop.

4. The best books on stock diseases are the volumes on horse and cattle diseases, published by the Department of Agriculture, Washington. These you can get through your Senator and Congressman.—Ed.

Kaffir Corn.

Will you please tell in your next issue how Kaffir corn should be cultivated? C. L. S.

Halifax Co., Va.

Kaffir corn should be planted and cultivated just as sorghum grown for cane is planted and cultivated. It resists a drouth better than corn, and should be grown more frequently than is customary here.—Ed.

Caponizing—Burr Clover.

1. I am a beginner in the poultry business; am much interested in that department of your paper. There is one part of this business that I would like to know more about, and that is caponizing. Does it pay? Would like to hear from some one or more who has had experience in this line of the poultry business.

2. You often speak of "burr" clover. What kind of clover is this? How does it differ from other clovers? I have talked with several old farmers here, and they know nothing of this variety. W. R. HANKS.

Weakley Co., Tenn.

1. In some sections caponizing fowls pays, and it is much practiced, but very few capons are sold in the South. They would have to be shipped to Washington or further North, and much would depend upon your securing a good market for the birds as to whether it would pay you. There is a little book published which gives full instructions how to caponize fowls, but we do not at the moment recall the name of the publishers, but will endeavor to look it up and let you know. Probably some of our subscribers can give instructions from practical experience, and we should be glad to hear from them.

2. Burr clover is a small variety of clover peculiar to the South, and up to this time has not been grown much further North than North Carolina, though it will succeed in this State. See article in our last issue on burr clover and Bermuda as a pasture.—Ed.

Soy Beans—Alsike Clover in Tennessee.

In regard to the query of J. F. Freeman, of Macon county, Tenn., in March SOUTHERN PLANTER, I beg leave to say that I think he will do better to plant the medium yellow soy bean than the early dwarf kinds. I have had good success with the medium yellow in the north end of Pulaski county, Ky., fifty miles or more north of where Mr. Freeman lives. I also tried Alsike clover there, but without success. I think he can grow rape if his soil is rich, but would much prefer a legume. JOHN B. LEWIS.

Norfolk Co., Va.

Miscellaneous.

FARM PRODUCTS NOW WASTED.

(CONTINUED.)

Another by-product which is almost wholly neglected is ashes. Although ashes contain all the mineral constituents necessary to plant growth and in the proportion in which they are actually taken up by plants they are entirely deficient in nitrogen. Hence their value as a fertilizer depends primarily upon the potash, and secondarily, upon the lime contained in them.

The percentage of potash varies according to the character of the wood from which they are derived and the manner of its burning. Hard woods give a higher percentage than soft, and in either case the percentage is larger when the wood is burnt slowly, as in open fires, than after rapid combustion, as in stoves and furnaces.

A fair average analysis is—

Unleached ashes, 7 per cent. potash, 1.75 per cent. phosphoric acid, 32.5 per cent. lime.

Leached ashes, 1.5 per cent. potash, 30 per cent. lime.

Thus a ton of unleached ashes contains 140 pounds potash, 35 pounds phosphoric acid, and 650 pounds of lime, all available, and having a comparative value of \$11.70.

Leaching carries off all the phosphoric acid, and most of the potash, but leaves nearly all the lime. Ashes are valuable for fertilizing all crops requiring potash, such as cabbage, corn, melons, onions, potatoes, wheat, rye, oats, and are particularly beneficial as a top dressing for clovers and grasses.

Are they, then, not worth saving?

Two other subjects press themselves forward for consideration, pulling fodder and the present wasteful disposition, no disposition at all or ill-considered disposition of straw. It is hard for farmers to abandon time-honored practices for those they are unfamiliar with, but conservatism is sometimes detrimental, as I shall endeavor to show it is in these particulars.

Pulling fodder has prevailed as an institution so long that it is regarded as one of the *must* bees, and farmers do not stop to count the cost. As a matter of fact, it is one of the most expensive farming operations not only in actual outlay when done by hired labor, but in the reduced yield of the crop entailed by it.

After much persuasion the first of these propositions is now so commonly conceded that I shall hasten to consider the second—viz., that fodder pulling is expensive because of its consequent reduction of the crop yield.

Careful observations made on the banks of the Po-

tomac, and therefore in our own neighborhood, prove that stripping the leaves from the corn when they are in condition to make good provender occurs while the plant development is so incomplete that the weight of grain is reduced at least 10 per cent., or 10 bushels in 100. In other words, from an acre of ground from which we should get 25 bushels, if the plants were allowed to go to maturity, we only get twenty-two and one-half bushels as the result of pulling off the blades. If, in addition to this procedure, the tops are cut the yield is reduced 18 per cent., and we gather but 20½ bushels instead of 25.

Do not these figures explain much of our short harvests, and are they not sufficiently startling to cause us to pause and consider before turning loose in our fields a lot of devastators in the shape of fodder pullers? Who would think of stripping his apple trees or grape vines of leaves and expect a full harvest of fruit or his rose bush and look for perfect flowers?

Farmers do not, I am persuaded, fully realize the waste and loss they incur in the matter of straw. This is now put to three uses—bedding, stock feeding and encumbering the land for several years awaiting its decomposition for fertilizing. If it accomplished these objects in proportion to its commercial value if baled and marketed no complaint could be made against such disposition. But does it do so? The first item—bedding—is undoubtedly the best of the three, but the amount so used represents but a small part of the product. The analysis of wheat straw is as follows:

Feeding value, protein, 0.37 per cent.; carbohydrates, 36.30 per cent.; fat, 0.40 per cent. Fertilizing value, nitrogen, 0.82 per cent.; potash, 0.32 per cent.; phosphoric acid, 0.11 per cent. Total, 1.25 per cent.

Both as a food stuff and as a fertilizer it stands at the bottom of the list of farm products. The proportion of carbohydrates, heat producing elements, is, it is true, in fair amount, but the protein, muscle forming element and fat are so inconsiderable that stock fed on straw during the winter must emerge in the spring with weak, flabby muscles, and be unequal to the work demanded of them. Even if a balanced ration be formed with other ingredients, stock, especially horses, ordinarily select the other articles and reject the straw. So well known is this aversion that several devices have been proposed to overcome it. One ingenious mind evolved the idea of putting green spectacles on the animals, and another proposed to dye the straw green so that the unsophisticated stock might be induced to eat it for hay. Suppose these subterfuges succeeded and the straw should be eaten, would anything be added to its nutritive

value? The muscular system would not be improved, no fat would be laid on nor would the bony structure be benefited. The carbo-hydrates would help to maintain heat, and that would be all, and this to a less degree than any other roughage on the farm. We may force animals to eat it and life may be maintained by it, but increased weight and proper development will not follow. Both economics, therefore, and proper consideration for the welfare of beasts are against its employment as food. In the same way we might pulverize a lot of sand and color it to imitate a first rate fertilizer and apply it to our land, and then lie back in the comfortable, self-deception that we had improved the soil, but while we might so fool ourselves, we could not deceive nature, and would gather no increased crop for our pains.

Now, turning to its use as a fertilizer. It has been seen that its total claim in this respect rests upon one and a quarter pounds in the 100. Is this worth waiting three or four years to get while the straw occupies land that might be profitably employed?

And now, gentlemen, these several items have been passed in review because, as I understand it, we have entered into an earnest purpose to try to better our system of farming where needful. This we can never hope to do if we take offense when our shortcomings are brought out in the open and held up to our gaze, nor if we allow our judgment to be so warped and case-hardened by old and musty prejudices that reason cannot control it. We must, on the contrary, approach each subject that is presented calmly and judiciously, weigh the evidence and be prompt to perceive and grasp the helping hand extended to us by the experience of others.

C. U. GRAVATT.

The foregoing article is one deserving the careful attention and consideration of every farmer. If the wasteful methods which the writer comments upon were followed in England, Scotland or on the continent of Europe farmers would all be bankrupt. Whilst we are in hearty accord with the writer in most of the conclusions drawn, we cannot assent to his views as to the valueless character of straw as a feed. Whilst it is true that straw of all kinds has less nutritive value than corn fodder or hay, yet when compared with some of these and with some other coarse feeds the difference is small. For comparison's sake we cite the following:

	Protein.	Carbo-hydrates.	Fat.
Wheat straw.....	3.4	43.4	1.3
Oat straw.....	4.0	42.4	2.3
Rye straw.....	3.0	46.6	1.2

	Protein.	Carbo-hydrates.	Fat.
Timothy hay.....	5.9	45.0	2.5
Corn fodder.....	3.8	31.9	1.1
Cotton seed hulls...	4.0	36.0	2.0

In England and Scotland both wheat and oat straw are carefully saved and fed in large quantity to cattle during the winter with turnips, ruta bagas and man-gold wurtzel, and whilst none of these root crops have by analyses a high nutritive value, yet the mixed feed of straw and roots with a little grain enables stock to make good growth and come through the winter in good order. We have fed hundreds of tons of straw, especially oat straw, with profit and satisfaction. Cattle need and must have for their best doing plenty of bulky food. They have large stomachs, and these must be filled to enable them to do well. To fill them with grain alone would simply kill them, and to feed them with grain and hay would in most cases make the ration too costly for profit. As a vehicle, then, for enabling grain or roots to be fed profitably, straw is available food, and should not be wasted. What the animals leave will usually provide sufficient bedding to keep them dry and comfortable. Prof. Henry, the greatest authority on live stock feeding, says: "While primarily used for bedding purposes, the softer kinds, especially oat and barley straw, are serviceable for feeding purposes. In Canada and England chaffed straw is commonly mixed with pulped roots and the mass allowed to soften and even ferment slightly, thus prepared, cattle readily consume large quantities with satisfactory returns. Oat straw because of its nutrients and its soft, pliable stems leads for feeding purposes with barley following." As between oat straw and timothy hay, and oat straw and cotton seed hulls, the analysis quoted above shows but little choice. In an experiment made at the Michigan Experiment Station, in feeding lambs those fed on straw and roots and grain gained 2.03 pounds per head per week, as against 2.83 pounds per head per week gained by those fed clover hay, corn stover, grain and roots.—Ed.

THE BUSINESS OF FARMING.

AN ADDRESS DELIVERED BEFORE THE INGLESIDE FARMERS' CLUB.

In these days of business activity great stress is laid upon our industries, and we have the fact constantly presented to us that our manufacturing interests must be protected for the benefit of the country. We are shown the large buildings required for changing the products of the farm, and yet by the process of con-

stant repetition we are led to believe that the farmer is only a side issue in the great stream of the world's business.

The corn produced on the farm is taken by the factory, and the products are returned to us in the form of starch, glucose, bran, germ oil meal, gluten meal and many other products. The miller takes the wheat and we get the various products in demand for everyday use.

Can farming be classed with our manufacturing industries is a question which would cause the person who regards the farmer as one who is a drudge to laugh, and to those who have given the subject attention the question would mean nothing.

The farmer in the past has by force of circumstances lived under conditions which have isolated him to a large extent and restricted his business relations to a few persons. These persons were naturally well known to him, and many of the tricks of the modern business world were unknown. The result of such conditions was to create a class of people who had great faith in the word of their fellow-man, and a printed statement being regarded as the truth.

It naturally follows that in the past the farmer has been under a serious disadvantage in his business relations. This condition is rapidly disappearing, and the future has much in store for the farmer who thinks for himself and carries on his factory on business principles.

His factory, did you say, some one exclaims! Has the farmer a factory? Yes, of course he has. The fact that no one has ever thought of it or paid any attention, does not alter the truth of the statement in the least. We hear some business men call attention to their buildings, and they take great pleasure if the floor space covers two or three acres. Some of our business farmers factories cover at least two hundred or more acres, and many have not given this fact even passing attention. He does not manufacture things, really, another exclaims! But he does, and in a truer sense than the man who takes a piece of lumber and changes it into a box or a bucket—more of a manufacturer than the man who takes the corn of the farmer and changes it to glucose, or the miller who makes the wheat into flour. If you doubt the statement, let us investigate and see.

In the ordinary process of manufacturing there is the material necessary to produce the product—the machinery which makes use of the material and the proper place to carry on the work.

The farmers factory is a combination of the soil and the air. The material which he uses is part of the soil, as that which comes from the air costs nothing directly, but the expensive process is the re-

placing of those elements in the soil which are essential for the growth of the plant. The crude material for the farmers factory is therefore the plant food in the soil.

The machinery which the farmer uses is the plant, and he is successful in the business of farming if he has a thorough knowledge of its work. In the spring when the plant is started in its growth it sends the root in search of food material, and this material must be present if the product is to be produced. The soil contains many substances of interest to agriculture, and the chemist has been the best friend of the farmer. Chemistry has taught us that the three most valuable elements in the soil are potash, phosphoric acid and nitrogen. If the plant food is drawn upon constantly and not replaced, the factory is soon out of supplies, and either must shut down or run under a reduced output and suffer a financial loss. It is therefore a good business policy to keep the supplies in such a condition that there will be no "lost motion" in the process of manufacturing. The plant machine must be supplied under the most favorable conditions.

In this connection, in order to produce the maximum product at the minimum cost, attention must be given to two problems. First, the purchase of the plant food under the most favorable conditions as to price and quality, and, second, the maintenance of the supply in such a state in the soil that there is always a supply of the required elements present, and in such a proportion that there is not a great excess of one or two and a lack or absence of the others. Such a condition exists where one or two elements are absent, and it will naturally mean an unsatisfactory result, for these elements cannot exchange places or replace one another in meeting the demands of the plant.

In considering the demands of the plant for its food, we have the following requirements for the essential elements by various crops:

	Nitrogen.	Potash.	Phos. Acid.
Corn	1.82	.4	.7
Corn stover	1.04	1.4	.29
Wheat	2.36	.61	.89
Wheat straw .....	.59	.51	.12
Oats	2.06	.62	.82
Oat straw .....	.62	1.24	.20

In the consideration of the three grains given above it will be noticed that the demands made on the soil by the plant varies according to the nature of the crop. To furnish the elements required by the plant in such a manner that we shall not have a large stock of one and a lack of the others is the most important problem that confronts us. In order that we may be able to get at the fundamental principles, let us con-

sider the elements which are valuable to plants and which must be furnished it in order that the machinery of our factory may produce a maximum output.

NITROGEN.—This substance is present in the air as a gas. The gas forms four-fifths of the air that we breathe, but the plant cannot absorb it by its leaves, and as this gas is only acted upon to a very limited extent by nature's forces to produce the products which can be used by the plant, it is necessary to supply it in other forms. The plant can only make use of nitrogen as a means of growth when it is in the form of salts, such as nitrates and ammonium salts, or substances which will produce these salts. In obtaining our supply of nitrogen we either must manufacture the products that the plant can use as a source of this element on the farm, or we must pay others to produce them for us. We may purchase our material in the form of nitrate of soda from the parties who extract it from the earth in South America, or we purchase it in the form of fish scrap, dried blood, ammonium salts and other products. The cost of nitrogen in these forms will be $13\frac{1}{2}$ to $16\frac{1}{2}$ cents per pound. On the other hand, if foresight is used, and by means of the leguminous crops we store up a supply of nitrogen in the form of vegetable or organic matter in the soil, we are not compelled to pay for this substance at the quoted rate. It is much more economical to make use of a process of nature in producing the supply of nitrogen than to purchase it at its market value. One might be criticised as lacking business ability if a practice should be made of purchasing the supply of this material to supply the plant. However, it must be kept in mind that under certain conditions it is wise to purchase this element in order to produce a good crop, but by means of foresight we can readily reduce the quantity purchased to a limited amount.

POTASH.—The plant must have this element in the soil in such an amount that it can be readily obtained. The source of potash is largely from the products imported from Germany, such as sulphate of potash, kainit and muriate of potash. The sulphate of potash contains 50 to 55 per cent. of potash, the kainit 12.4 per cent. and the muriate of potash 50 per cent. The cost of potash in the last two substances is 5 cents per pound, while in the sulphate the cost per pound is $5\frac{1}{2}$ cents. It must be considered in the purchase of the salts whether the sulphate will produce the best results at the higher price, or whether the other salts can be used without any injurious effects on the crop. As a rule it is only necessary to apply the higher priced sulphate to certain crops, and the cheaper forms of potash will be satisfactory in most cases.

PHOSPHORIC ACID.—This substance is the last of the three elements regarded as most valuable as plant food. The sources of this substance are the deposits found in various parts of the country, but more especially in South Carolina and Florida. The hard rock in various sizes, from a pebble to large piece, is first reduced to a fine powder. This powder is treated with sulphuric acid to render the phosphoric acid available to the root of the plant. The action of the acid is to combine with the lime present in the phosphate and produce sulphate of lime or land plaster, and this action of withdrawing the lime from the phosphate results in a product which can be absorbed by the root of the plant, or, in other words, the phosphate is made available to the plant. The cost of phosphoric acid produced in this manner is about 4 cents per pound. The experiments recently made at the Illinois Experiment Station indicate that the finely-ground rock can be made available to the plant without the treatment with acid. If the method of mixing the ground rock with the manure prove satisfactory, it will not be necessary for the farmer to pay for the manufacturing of the phosphate. If the farmer can use the fermenting processes which take place in the decomposition of the vegetable matter of manure to render the phosphoric acid available to the plant, it will serve to reduce the cost of the element so valuable to the soil.

J. B. WEEMS.

(To be continued.)

SEEDING CLOVER.

Editor Southern Planter:

I have just seen Colonel R. H. Dulany's letter complaining of not being able to get a stand of red clover. Twenty-five years ago I used the harrow to put in the clover seed, but it was very unsatisfactory. For more than twenty years I have used the wheat drill. I mix three-quarters of a bushel of orchard grass (we cannot graze cattle in this county without it), one quart of clover seed, with raw bone, kainit, South Carolina rock, plaster (or any other mixture you may prefer), put in with the wheat drill across the wheat, putting in about two hundred pounds to the acre, with three quarts of clover seed in the seed box in front part of drill. This application should not be made until the wheat has made a good "start" in the spring. You would be surprised to see how few plants of wheat are pulled up. Besides insuring you a good stand of clover, it improves the wheat. If the ground is hard, use sharp-pointed teeth; if it is light and mellow, use well-worn teeth. With a very dry season and a very hot sun at and after harvest, the clover may be killed, but having done your part you must leave the balance to the Lord. **SUBSCRIBER.**

THE Southern Planter

PUBLISHED BY

THE SOUTHERN PLANTER PUBLISHING CO'Y,
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.B. MORGAN SHEPHERD,
Business Manager.TERMS FOR ADVERTISING.
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

NO ANONYMOUS communications or enquiries will receive attention.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

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Address THE SOUTHERN PLANTER,
RICHMOND, VA.

Entered at the Post-office, Richmond, Va., as second-class matter.

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PUBLISHER'S NOTES.

To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month.

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There are thousands of farmers who do not read the Southern Planter but who should do so.

As we are not able to personally solicit subscriptions from such farmers we are going to rely on our friends, as usual, to help us out. Any person who is not now a subscriber can have THE SOUTHERN PLANTER the rest of the year, nine issues, for 25 cents. We will start these subscriptions with the April number as long as the edition lasts. Should other subscriptions come in between now and June 1st we will start these subscriptions with the current issue. We will not be able to supply any back numbers.

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Per E. A. Trenor, Supt.

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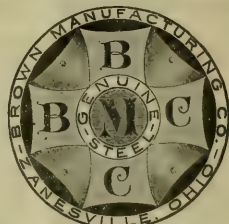
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THE VALUE OF SMALL ARMS IN MODERN WARFARE.

The Russo-Japanese war has taught modern war experts many important lessons, but none more convincing than the relative value of infantry and artillery in scientific warfare. Formerly it was a popular belief that the greatest power of an army was gauged by its artillery, but recent battles have proved that the real fighting strength of an army lies in the effectiveness of its infantry. Cannons are useful in reconnoitering the enemy's position and searching the opponents lines, but the tide of battle is turned by the trained infantry—the men who know how to use the rifle. The Japanese attribute their remarkable successes to the skill of their infantrymen in the use of the small arms.

It was this same skill that won the day for the colonists when they were fighting for liberty against great odds. In those days every boy in the land knew how to shoot straight with his rifle, for he had been taught to use a gun from the time he was old enough to lift it.

The healthy out-door life that the boy lives when he possesses a rifle means self-reliance, strength of character, fortitude and moral courage. This is why shooting, even as a pastime is an essential in the building up of a strong race of America's men.

This thought is right in line with the ideas that the J. Stevens Arms and Tool Co., of Chicopee Falls, the famous firearm makers, have been advocating for some time. The handsome book of this company is a mine of information on gun owning and gun shooting and makes interesting and instructive reading both for the boy and grown up. The Stevens people have offered to send this book free to any address on receipt of four cents to cover postage.

WHERE HAD HE BEEN?

A "breed" and a white man were engaged in what Old Man Donnelly called a "rancicaboo" when Stag-Hound Bill stepped into Sam Jeffrey's saloon one night. Sam Jeffrey's saloon enjoyed a monopoly near an Indian reservation. There was a faro game in full blast and a spirited poker game. Bacon-Rind Dick was drunk again and squeaking like a mouse in the wall. The air was thick with smoke, and a man had to order his drinks at the top of his voice in order to be heard above the uproar of the tumultuous cowboys and stockmen. Stag-Hound threw his pack-saddle in the corner and sat down.

"My gosh!" he said to his neighbor, a smile of contentment playing about the corners of his mouth, "but it seems good to be back in civilization again."—Lippincott's.

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AND THESE ARE THE REASONS
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The "BROWN" principles increases its strength, durability and neat appearance.

We use Double Sliders for the coupling pole. The Tongue Chains have Coil Springs in them—makes them easy on the horse's neck. Best Hooks—lost their wheels—can't get out of place, can't slip. Hot Oil-bolled Wheels—tires can't come off.

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Branch Chains to tongue chains—can't whip horse's legs. Besides all this it is stamped "BROWN," which is a guarantee of excellence and superiority.

All about styles and sizes in free circulars.
BROWN MFG. CO., ZANESVILLE, OHIO.

AN IMPORTANT ANNOUNCEMENT. FREE INOCULATING MATERIAL FOR LEGU- MINOUS CROPS.

The question of soil inoculation for the production of various leguminous crops is now prominently before the public. Realizing the importance of this subject to Virginia farmers, the Virginia Experiment Station, through its Department of Bacteriology, has undertaken the preparation of inoculating material for alfalfa, vetches, cow peas and soy beans. This work is in charge of Dr. Meade Ferguson, bacteriologist of the station. The various cultures mentioned are now in the course of preparation and will be ready for distribution in ample time for inoculating soil for any of the above crops this spring. Enough of the particular bacteria applied for to inoculate five acres of land will be sent to any farmer residing in the State on the following conditions:

Twenty-five cents will be charged for sufficient material to inoculate one acre of land. This charge is not made for the service of our bacteriologist, but simply to cover the cost of a container for the solution that can be transmitted with safety through the mails, and also to pay postage. All the labor of inoculating and preparing these cultures for distribution in the State is being borne by the Station but the authorities believe that if the bacteria will accomplish anything like the results claimed for them that persons receiving the material gratis would be glad to pay the small charge imposed for packing and mailing which the Station has no legitimate means of meeting, and as this offer is made to all the farmers of the State, it is clear that the burden would be greater than the straightened finances of the Station could bear. When the packages are sent out they will contain printed directions as to how to use the bacteria most effectively. A blank will also be enclosed and it is expected that every farmer receiving a package will report at the end of the growing season to the Station authorities on the results of his work. This information is desired in order that the effectiveness of soil inoculation for the crops mentioned may be definitely ascertained.

The value of inoculation becomes apparent when it is stated that farmers can often secure good stands of alfalfa and are able to grow the crop fairly well for one or two years, after which it sickens and dies. It seems as a rule that when these results follow no nodules have formed on the roots of the plants, and as the bacteria which give the plant its power of assimilating atmospheric nitrogen reside in these nodules, the cause of death is apparent. The great value of leguminous crops lies in their power to gather atmospheric nitrogen and store it in the soil through the action of the bacteria just described. Therefore, the importance of inoculation be-

YOU Can Save a Lot of Work! Can Save a Lot of Money! Can Increase Your Comfort! Can Increase Your Profit!



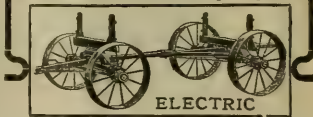
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Weeder and Cultivator.

Makes sure crops, increases yield. Kills weeds, stirs soil, preserves moisture at plant roots. 7 feet wide, narrows to 30 ins. Famous Hallock flatfoot (under license). Ask for book of many photographed field scenes of weeder at work.

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Cultivator Attachment. for any cultivator. Runs on the row, where shovels can't go. Weeds, cultivates, uncovers corn, levels. Makes corn cultivation complete. Send for circulars of Farmers, Cultivators and Attachments. Free.

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Just right for use in corn barns and for driving under low sheds—easy to load. Right width to straddle corn rows. No waste or scattering in yard or on road, no freezing manure on box. Solid bottom, scraped clean every load. Automatic drag return. Double wheel drive, safety end-gate, strength to stand the rough driving and the operating of machine.

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Durable,
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A single row corn planter, made with or without fertilizer attachment. Has either double or concave single wheel. Has cranes or dropping dies. Dropping and fertilizer feed regulated by link chain belt. Chain wheels for corn, drop grain from 12 to 24 inches. From 24 to 33 inches in corn. Extra feed wheels for fertilizer attachment drills 20 to 25 lbs. fertilizer per acre. Ground wheel in front can be raised or lowered for deep or shallow planting. Extra rings can be supplied for dropping or drilling peas, beans, vetches, etc. Write for Circular. Write for Circular. **HENCH & DROMGOLD, York, Pa.**

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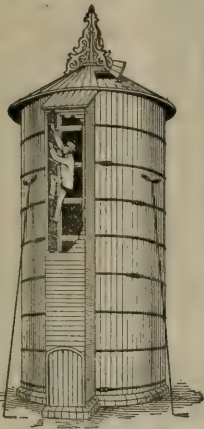
and send a Heavy Whisk Steel Tire on, \$7.25 With Rubber Tires, \$16.00, 1 mfg. wheels 4 to 4 in. tires. Top Bogies, \$23.75; Harrows, \$3.60. Write for catalog. Let us send direct. **Box 146, Quincy, Ills.** Wagon Umbrella FREE. **V BOOB, Cincinnati, O.**



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comes apparent, for atmospheric nitrogen can be stored in the soil at a very low cost to the farmer, whereas he has to pay at least 15 cents a pound for it in a commercial form. The Station believes that in offering these cultures to the farmers that it is doing a work of pronounced value for the advancement of the agricultural interests of the State. These cultures are guaranteed to be pure and true to name, and it is believed that hundreds of farmers will be glad to avail themselves of the opportunity presented to test the merits of artificial soil inoculation.

ANDREW M. SOULE,
Director.

Virginia Experiment Station.

VOCAL TALENT.

I had been taking a horseback ride through the southern part of Missouri, and one night, finding myself in a very sparsely settled district, I was forced to continue in the saddle until mid-night before I saw the dark shadows of a village at the end of the road. Just outside this village I came to a miserable little cottage where a light still burned in the window; I knocked on the door to inquire for a place to put up for the night.

"Is that you, Tad?" came a gruff voice from within.

"No," said I, "Open the door a minute, I want to ask you something."

The bolt was drawn, and a man attended in a cotton undershirt and overalls looked out sleepily into the darkness.

"I thought you was my boy, Tad," he exclaimed, rubbing his eyes, "and, snip my ears! here he is now!"

A barefoot youth came panting out of the shadow with his arms full of shoes of various sizes and colors.

"Get any?" asked the man expectantly.

"Yassir," replied the boy in a filial tone—"seven of 'em to-night and two of 'em is a pair."

"Good!" the man said, and then he turned to me with the manner of one who thinks an explanation would be polite. "You see, Tad can make a noise that sounds louder and has more worry to it and sounds more natural like a tom cat than any cat in this country can make. So he just goes into the village and yells under windows about this time in the fall. Then he picks up what is flung out."

"And you get shoes enough for winter," I finished.

"Stranger," said the man solemnly. "I can see you ain't a fool."—Lippincott's.

Little Stanley had spent his first day at school. "What did you learn?" was the mother's first question. "Didn't learn anything." "Well, what did you do?" "Didn't do anything. But there was a woman there who wanted to know how to spell 'cat,' so I told her."

In writing mention Southern Planter

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Does better work than can be done by hand, and twice as fast.

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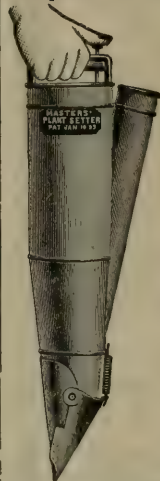
of water per acre with this setter will produce

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Gasoline engines, 3 horse power, \$100; 5 horse power, \$150; mated wood sawing outfits with 3 horse engine, \$200; with 5 horse engine, \$250. Marine engines, pumping engines. Catalogue free. Agents wanted.

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Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 3 horse power, \$100; 5 H. P. double cylinder, \$200.

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Will buy our 2 H. P. 4 Cycle Engine. Other sizes in proportion. Buy direct and save dealer's profit. Vertical, Horizontal and Portable Gasoline Engines. Pumping outfits a specialty. Write for free circulars.

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Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the subsoil water. It is an excellent machine for covering in sugar cane. Strength guaranteed.

Can plow a newly out forest, stump, bush, or bog land, leaves land true, clean for any crop.

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Clark's Rev. Sulky Disc Plow

Made single or double One or two furrows five to ten inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar plow made. When Clark's grass tools are used as directed in his grass circular, we the C. H. Co., guarantee them to kill wild mustard, charlock, hardhack, sunflower, milkweed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seedling grass.

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Cultivator with Double
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Attach Complete in
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They all Embody Brown Quality.

is needed here perfect cultivation is desired. It is well made with steel frame. We make also a full line of Riding and Walking Cultivators, Harrows, single and double Shovel Plows, Five Hoe Cultivators and the Famous Brown Wagon. Illustrated catalogue FREE.

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Letter Heads	30c.	\$1.00.	\$1.50.
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Send cash with order.
STAR PRINTING CO., Millboro Springs, Va.

Mention THE SOUTHERN PLANTER in writing

FARMERS' CLUB ROOMS IN TOWNS AND CITIES.

Editor Southern Planter:

The familiar face of the Southern Planter was gladly welcomed recently and my only regret is that under the curious freaks of Uncle Sam's mails its visits are not more regular and frequent. Though your work in detail is more directed to other sections than ours, yet its general principles and methods come in very well everywhere, and some of its details are not without useful application among us also.

Incidentally I will mention that I find one old friend, the Bermuda (or wire) grass growing well in sunny exposures in this central part of West Virginia, at an elevation of about 1,400 feet above sea level.

What I set out to speak about especially, though, is this: Conversing recently with some town residents in this section, I started the idea that it would not do for all the smaller towns, even in this section, to depend on manufactures or coal mining alone for growth; but that they all should keep a good eye on the farming interest also, as the country at large is bound to be always largely agricultural.

For the promotion of this special end I suggested the idea of a farmer's club room or headquarters to be established and maintained by the merchants of the town or its citizens generally—a place where farmers' coming to town could meet each other and other parties—provided with books, papers, and pamphlets, where club meetings might be held and others open to the public, lectures on farming topics be delivered, addresses made, etc. The idea is capable of various degrees and forms of application to suit the varying needs and abilities of different places.

The walls of such a room might be hung with pictures of fine stock, machinery ads., etc., photographs of fine crops and rural scenes, country houses, etc., "eye-openers" and thought provokers of many kinds.

On its tables might be found good farming papers and magazines, such as the Country Gentleman, American Agriculturist, Southern Planter, Practical Farmer, etc.

If need so require, as might be the case in some instances in the larger cities and towns, there might be not one only, but several such places, and also arrangements for limiting the attendance by means of cards or tickets of admittance. These might be put on a basis of privilege and stimulus to interest and ambition, made the rewards of special attainments in production, profitable results, etc.

I have time only to suggest the idea, leaving it to you and to your readers to work out the details. People generally, and towns, cities, and corporations even, are beginning to find out that their own interests are daily bound up with those of others, and that they must interest themselves in



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SHOULD BE SPRAYED

now in order to secure best results. Let us tell you how in our complete Catalogue and Spraying Calendar.

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We sell direct to Farmers and Poultrymen. **Prompt Shipments at Factory Prices.** Mills in Connecticut, Illinois, California. Write for catalogue.

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Party failed, and we bought his stock at prices you never heard of. We will fill orders as long as this stock lasts lower than any house. The old reliable is always satisfactory wire. Mail your orders and secure a great bargain. All kinds of wire. **HARRIS HARDWARE CO., 409 E. Broad street, Richmond, Va.**

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We also sell direct to farmers at wholesale prices. See Spring, Barb and 5th Galvanized Wire. Write for Fence Book showing an exhibit.

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Each Strand

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Contains six continuous wires forming two double rails and a double strand. **FIVE SAMPLES.**

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would be very unsatisfactory unless the fence was reliable, because it would require no maintenance to keep it in repair. **NINETEEN YEARS, no repairs** excepting new posts, and still a good fence, your record, and we are making Page Fences better now than ever before, with a better wire, thicker galvanizing, larger cross-bar.

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WITH YOUR FARM

Use "Jones" Fences. Use "Jones" Gates. They will give most satisfaction and a better looking job than any other fence made. Strong, durable and easy to put up. Write for catalog No. 8 and prices.

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the prosperity of others to prosper themselves—witness the "gospel" of the Northwestern States, and the "gospel trains" the railroads are sending out on their own account, and their results.

This club idea seems specially applicable to some of your tobacco towns with their special sales days, etc., and farmers often spending two or three days in town and time hanging heavily on their hands. There is no end to the interest that might be excited and the benefits that might result from such a plan well conceived and executed. Wherever practicable, there should be a curator, or some one to look specially after such rooms, see them kept in order, regulate admittance, keep out loafers, etc. Sometimes this might be done incidentally in connection with office privileges granted in the same or adjoining rooms.

The aim should be to do as much and as well as possible. Of course I don't fancy for a moment that the idea of a farmers' club is at all a new one, or that of farmers' headquarters of some sort or other in town either, but my suggestions are designed to put these matters on a little different footing, as to aim, spirit and methods. My idea is to have the thing taken in hand more systematically and zealously by the people of the towns and cities generally, as a matter concerning both the general welfare of the communities and their own in particular; and to have the thing worked out with care and thoroughness, and on business principles.

So done, I think it cannot fail to bring good results. **C. H. S.**

HIS SEQUIT.

Little Harry's affection for his old grandmother is all that the affection of a child should be for a grandparent. One morning when he was "snuggling" in her bed he put his plump little arms around her neck and said:

"Gramma, I'll tell you a big sequit if you won't ever tell anybody in all the world."

Having bound herself to secrecy and even "crossed her heart," the old lady was made the recipient of the following:

"Well, gramma, some day I'm going to get married to—you can't guess who."

"No, I'm afraid I cannot."

"To—you, gramma!"—Lippincott's.

CURED FISTULA AND ORDERS MORE.

Elk Run, Va., Feb. 6, 1904.
The Lawrence-Williams Co., Cleveland, O.

I wish you would please hurry this matter up as I need the medicine right away. I used Gombault's Caustic Balsam once before for fistula and I had fine results. The horse is entirely well. **HERBERT COX.**

GENUINE "BROWN"

DOUBLE SHOVEL PLOW

Made with WOOD CENTER BEAMS AND STEEL SHANKS.



LIKE ALL THE "BROWNS" IT IS THE BEST OF ITS KIND.

No chance for horse to get foot between beams.

No. 2

Equipped with our Improved slotted shovel attachment, a device which greatly adds to the life of the shovel. Always ask for the "BROWN" and insist upon getting it. If your dealer does not have it, write to us direct. Our free catalogue contains full description of our single and double shovel plows, Riding, Walking and Tongueless Cultivators, "GOIN'S" Surface Cultivators, Harrows, Wagons, etc.

BROWN MFG. CO., ZANESVILLE, O.


THE IMPROVED SCREW STUMP PULLER.

Write for Prices.



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HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without mowing or changing machine. Strongest, most rapid working and best made.

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 "Favorite, No. 17" . . . \$6

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Our valuable 140-page book tells all about the "Stevens," the proper care of a firearm, and has many articles on hunting and other outdoor sports. Sent FREE if you will send 4c. in stamps to cover postage.

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SOUTHERN POETS—NO. 3.

DR. THOMAS HOLLEY CHIVERS.

(Mary Washington.)

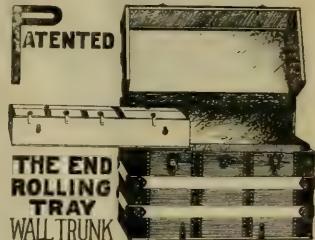
My foregoing sketch of Poe suggests to me to write next of another Southern poet between whom and Poe, there was a friendship, a strange affinity and a shadowy resemblance. I refer to Dr. Thomas Holley Chivers, of whom till recently, very little was known, but strange to say, of late years, a move has been made, almost simultaneously in this country and Great Britain to draw aside the veil of oblivion and bring his memory to the front. In the latter country, this move has been made by Mr. Andrew Lang, of Scotland, the distinguished scholar, poet and critic who in his explorations in the British Museum discovered amongst its archives a complete set of Dr. Chiver's writings. The only one extant. Mr. Lang proclaimed his discovery with much impressment, but readers of Bayard Taylor are aware of the fact that he anticipated Mr. Lang in this exploit. The facts which have recently come to light about Dr. Chivers are due in great measure to Mr. John Quincy Adams of Washington, Georgia, a relative of the poet, and himself a good writer. Dr. Chivers was born at Digby Manor, Ga., in 1807. His progenitors were English on both sides, and settled originally in Virginia. His mother's maiden name was Digby. His father was Col. Robert Chivers, a rich planter and mill owner. He early recognized the gifts of his son, and gave him every facility for developing them. The young man graduated with distinction at Transylvania, now the University of Kentucky, about 1828. But he cared only for the scientific part of his profession, and in a few years, he gave it up for literature, although he gave medical service gratis to the poor, throughout his life. Dr. Chiver's correspondence discloses the fact that he was held in high esteem by many men of note, and was considered an authority on a wide range of subjects, especially the Hebrew language and literature. Amongst these letters (now in the possession of Mr. Adams) there is a pathetic one from Edgar Poe, mentioning "The Stylus," the magazine he was planning to start. In this letter, Poe says, "Please lend me \$50 for three months. I am so poor and friendless, I am half distracted. I shall be all right when you and I start our magazine." By the way, "The Century" in a little circular, setting forth its attractions for 1903, announced that it would publish some letters from Edgar Poe to "the eccentric Southern poet, Dr. Chivers."

The chief thing that has invested Dr. Chivers with interest is the fact that he wrote lyrics which when he did his best, bore a shadowy resemblance to those of Edgar Poe. In regard to this resemblance, he solemnly asserted, and many competent and dis-

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tinguished persons corroborated his statement, that his style was not borrowed from Poe's, but antedated it. Hence it may be inferred that if either received any suggestion from the other in reference to style, Poe received it from Chivers, rather than vice versa. If this was the case, I must say however that Poe improved immeasurably on the suggestion received. Like Poe, Chivers seems to have had a peculiar sense for the sound of words, and this, under proper training and control, and guided by unerring taste (such as Poe had) might have led to form results, but with Chivers, it ran riot into resonant words and thundering phrases. The following lines will serve to exemplify this:

"Many mellow Cydoman luskets
Sweet apples, anthosmial, divine
From the ruby rimmed beryline buck-
ets

Star gemmed lilyshaped, hyaline,
Like the sweet golden goblet found
growing

On the weed emerald cucumber tree,
Rich, brilliant, like chrysoprase glow-
ing,

Was my beautiful Rosalie Lee."

At the age of twenty-five Chivers went North to live, and shortly afterwards married a Miss Harriet Hunt. In 1856 he returned to the South and made his final home in Decatur, Ga. Mr. William Gilmore Simms, who was then one of the leading literary men of the South took much interest in Chivers, and called him "The wild mazzepa of letters." Simms frequently rallied his friend on his strange choice of words, and on the monotony of his sorrow. In good humored retaliation, the doctor advised Simms to "leave off writing stupid novels and take up literature as a pleasure."

Mr. Adams tells us that Chivers had a turn for painting as well as for literature, and made frequent portraits of his family, besides making some notable pen and ink sketches. He had also an inventive turn of mind, and originated so valuable a machine for unwinding the fibre from silk cocoons that it received a silver cup, as prize, at some Southern exposition.

His death occurred at Decatur, December 18, 1858, and was very much noticed at the North. We may judge how wide spread was his renown amongst scholars from the fact that Prof. Gierlow, a Danish author, wrote a beautiful poem on the event of his death.

During the civil war, the deceased poet's library, being on the line of Sherman's march to the sea, was either destroyed or confiscated, and his MSS. all, more or less injured, one of the many instances in which the intellectual treasures of Southern scholars or authors were ruthlessly injured or destroyed.

The most pathetic feature of his life and work is embodied in the one word, almost. He did not quite touch the empyreon at which he aimed. There

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W. F. YOUNG, P. D. F.,

109 Monmouth St., Springfield, Mass.

were great and lovely visions floating dimly before him, but he could not quite grasp them, and give them adequate expression. At times, he nearly reached the high level of genius, but there was some lack of the needed impulse or finish, some defect or incongruity which made him like Moses, fall short of reaching the promised land, even when in sight of it.

Amongst our early Southern poets was Bransford Vawter, of Lynchburg, Virginia, a young man of rare gifts, but who did not live long enough to fulfill the brilliant promise of his youth. He was born about the year 1815, and was of plain origin, his father being a tailor. As he grew up, he evinced poetical talent of a really remarkable order, the light of which, however, was quenched by his early death. Only one of his poems is extant, but that is a gem, combining the two prime requisites of real poetry, fineness of thought and beauty of expression. Wolf, the English poet, has gone down to posterity famous on the strength of one poem, "The Burial of Sir John Moore," and I think Bransford Vawter might with equal justice be placed on the roll of fame on the strength of the poem I now subjoin:

"I'd offer thee this hand of mine,
If I could love thee less,
But hearts so warm, so pure as thine
Should never know distress.
My fortune is too hard for thee,
'Twould chill thy dearest joy—
I'd rather weep to see thee free,
Than win thee to destroy."

"I leave thee in thy happiness,
As one too dear to love,
As one I think of but to bless,
As wretchedly I rove.
And oh, when sorrow's cup I drink,
All bitter though it be,
How sweet 'twill be for me to think
It holds no drop for thee!"

"And now my dreams are sadly o'er,
Fate bids them all depart.
And I must leave my native shore,
In brokenness of heart.
And oh, dear one, when far from thee,
I ne'er know joy again,
I would not that one thought of me
I should give thy bosom pain."

These lines arrested attention and admiration at once, and a prominent periodical of the day advertised for the writer to come forward and receive a prize. Bransford Vawter then acknowledged himself to be the author of the above exquisite lyric.

Frederick William Thomas was born in 1808, but it is difficult to fix his birth place, as one authority says Baltimore; another, Charleston, and still a third says Providence. He wrote many novels which are forgotten now, "Clinton Bradshaw," "Howard Pinkney," "East and West," etc. Besides these, he wrote numerous poems, essays, sketches, leaders, squibs and

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He wrote a series of sketches, biographical, political and personal of John Randolph of Roanoke and other public characters. These appeared originally in newspapers, but were collected together and published in book form in 1853.

While most of his writings are now consigned to oblivion, he is still remembered as the author of a very popular song which I subjoin:

"Tis said that absence conquers love,
But oh, believe it no,
I've tried, alas, its power to prove,
But thou art not forgot.
Lady, though fate has bid us part,
Yet still thou art as dear,
As fixed in this devoted heart.
As when I clasped thee here."

"I plunge into the busy crowd,
And smile to hear thy name;
And yet as if I thought aloud,
They know me still the same.
And when the wine cup passes round,
I toast some other fair
And when I ask my heart the sound,
Thy name is echoed there."

And when some other name I learn
And try to whisper love
Then will my heart to thee return,
Like the returning dove.
In vain, I never can forget,
And would not be forgot;
For I must bear the same regret,
Whatever may be my lot.

"E'en as the wounded bird will seek;
His favorite power to die.
So, lady, I would hear thee speak,
And yield my parting sigh.
"Tis said that absence conquers love,
But oh, believe it not.
I've tried, alas, its power to prove,
But thou art not forgot."

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THE TURK'S RETORT.

David R. Francis tells the neatest repartee he heard on the fair grounds at St. Louis last summer. An elderly woman entered the Turkish mosque on the Pike and fell into conversation with one of the attendants. She was much interested in his spiritual welfare and said to him, "I hope you go to church every Sunday, like a Christian." The man replied quickly: "No, madam, I go every day, like a Turk."

BARGAINS in Northern Virginia and near Washington, D. C.

I describe below a few of the many choice properties I have for sale. I shall be pleased to show them or further describe them to any interested party.

735 acres; 150 acres in good hard timber; balance in good state of cultivation; 9-room stone dwelling; 3 tenement houses from 5 to 7 rooms; one stone, metal-roofed cow barn, granary and feed barn; plenty room for 60 head cows, grain and long feed; 2 frame horse barns for 20 head horses and all long feed; 4-room dairy; cost \$2,000; all buildings in fair condition; all necessary outbuildings; practically all fenced with wire, stone and rail fencing; numerous live streams and springs on place; in suitable fields of water in all; county road through edge of place; lanes fenced; post-office, schools, churches, stores $\frac{1}{2}$ miles; $\frac{7}{8}$ miles from Manassas and Clifton Stations, on main line Southern R. R.; 9 miles Herndon Station, on Bluemont Division Southern R. R.; $\frac{7}{8}$ miles from Fairfax Courthouse, county seat; $\frac{1}{2}$ mile grist and saw mill; rolling red loam, well adapted for cropping, grass and fruit; has been run as dairy farm with success; would make an ideal stock farm; cost \$15 per acre 50 years ago, and had over \$25,000 spent on improving place; the best natural soil and farm of its size in this section; requires little fertilizer; poor health cause of desire to sell; never on market before; would make several nice smaller farms. Price \$25,000; 10 cash, balance in 3 years, interest at 6 per cent.

No. 1. Fine fruit farm; 100 acres, in corporation of Fairfax; has 1,100 peach trees, 4,000 of the very best grape vines, and all other kinds of fruit and berries. 8-room frame house, large frame barn and all outbuildings and well; stream through farm; 1 mile from electric cars; trees are all in full bearing, and fruit will pay for place in a short time. This is a bargain. Price \$6,500 cash.

No. 3. Fine 111-acre farm; 60 acres clear, balance in good timber. Good 10-room house, large barn, all necessary outbuildings and tenant house; all kinds of fruit and berries; near electric cars, church, school and stores; on the Alexandria pike, $\frac{1}{4}$ miles from Fairfax, Va. Price \$40 per acre. Terms $\frac{1}{2}$ cash; balance to suit.

No. 4. 100 acres; one of the finest farms in Va.; in the very best of cultivation; fine, large 12-room house, large halls and cellar; water in the kitchen; beautiful lawn surrounded by hedge; all kinds of fruit and berries; very large barn and all outbuildings; first-class fence all around the farm; divided in 50 lots for pasture, mowing, etc.; stream through the farm; near the town of Vienna; steam and trolley lines. Price \$17,000; part cash, balance to suit. Would take city property in part.

No. 5. 170 acres; 45 acres clear, balance in timber; 6-room house; well of water, some fruit, small stable and corn house; partly fenced; $\frac{1}{4}$ miles from Clifton Station; near school, church and stores. Price \$7,500 per acre; one-third cash; balance to suit.

No. 7. Good dairy farm of 102 acres; in cultivation and grass; all kinds of timber; well watered; 8-room frame house, basement barn 35x50; well fenced; all necessary outbuildings; $\frac{1}{4}$ miles from railroad station; school and mill; all kinds of fruit. Price \$3,000; \$100 cash; balance to suit.

No. 10. 30 acres near Vienna; 5 acres cleared, balance in all kinds of timber; near electric and steam cars, stores, church and school. Price \$900; one-half cash; balance to suit.

No. 11. 450 acres; 350 in cultivation; balance in fine timber; 9-room house; well at door, spring near by; stream through farm; 2 large barns; all other necessary buildings; also tenant house. This is a fine farm for dairy and stock; $\frac{1}{4}$ miles from Clifton Station, on Southern R. R.; school, church and stores. Price \$450 per acre; one-third cash; balance to suit.

All of the above properties are either on or near Steam or Electric roads, in a grand section of country, right at the best markets in the country. Be sure and get my catalogue before buying.

No. 13. 300 acres; 100 cleared; balance in oak timber; 3,000 peach trees and other kinds of fruit; 6-room house; barn 30x40; all other buildings necessary; $\frac{1}{4}$ mile from railroad, school, store and church. Price \$6,000; one-half cash; balance to suit.

No. 14. 20 acres; 14 acres cleared; balance in oak timber; 50 pear, 100 peach and 100 apple trees; stream through place; near Fairfax; stores, church, school and electric R. R. This is a fine place for a hennery or apiary. Price \$1,200, on easy terms.

No. 16. 148 acres; 75 clear; balance in all kinds of timber; 3-room house; small barn, hen house and meat house; it well watered, good fences, all kinds of fruit; 3 miles from Fairfax and Clifton Stations; mill near place; school and church near by. Price \$2,000; one-half cash; balance to suit.

No. 18. 120 acres; 12 acres clear; balance in all kinds of timber; 2-room house and stable; spring and running water; partly fenced; $\frac{1}{2}$ mile from station, school, church and store. Price \$11 per acre; one-half cash; balance to suit.

No. 21. Very cheap farm of 100 acres; 90 clear; 10 in cultivation; balance in timber; 7-room house; small barn and cow shed; water in every field; good fences; all kinds of fruit; 1 mile from church, school and store; 3 miles from R. R. Price \$1,800; terms to suit.

No. 24. Timber tract. 21 acres, $\frac{1}{4}$ mile from Oakton, on electric R. R. Price \$50 per acre, cash.

No. 29. 50 acres in the Corporation of Fairfax; with station of new electric R. R. in centre. Price \$4,000; terms to suit purchaser.

No. 33. 150 acres; 75 cleared; balance in timber; 3-room house, small barn and other buildings; well watered; all kinds of fruit and berries; near school, church, store, and post-office; 5 miles from R. R. This is a cheap place. Price \$1,500; one-half cash; balance to suit.

No. 40. 37 acres; about 10 cleared; the balance in pine; 5-room house; spring near; two streams through the place; partly fenced; some apple trees; $\frac{1}{4}$ mile from school and church; $\frac{1}{2}$ miles from R. R. and store. Price \$500. Terms \$150 cash, the balance to suit.

No. 47. 200 acres; 75 in grass; 25 for corn this spring, the balance in good oak timber; 6-room house, new basement barn 25x40; all other necessary buildings; 2 good springs near the house; stream through the place; water in every field; partly fenced; all kinds of fruit; large apple orchard; $\frac{1}{4}$ miles from electric R. R.; $\frac{1}{2}$ mile from school, $\frac{1}{2}$ miles from church and $\frac{1}{4}$ mile from store. Price \$9,000. Terms, 2,000 cash; balance to suit.

No. 50. Over 200 acres; 100 cleared; large new house not finished; a noted fine spring; 6-room house, the place a mile from Lottsburg, on Warrenton pike; 12 R. R. and Martville; school, church and store. Price \$2,500. Terms to suit.

No. 55. 140 acres; 70 clear, the balance in all kinds of timber; 6-room house; barn 25x40; fine spring water through the place; all kinds of fruit; 5 miles from railroad and 3 miles from electric railroad; $\frac{1}{4}$ mile from school, church and store. Price \$2,000. Terms, one-third cash; balance to suit.

No. 57. 320 acres; 60 in cultivation; the balance in a good state of cultivation; fine large house, beautiful lawn, two tenant houses, fine, large bank barn and all other buildings needed, and all kinds of fruit; plenty of pure water through railroad and small village, where there is almost all kinds of business going on. This is a very fine farm; lays on a public road. Price \$2,000; on easy terms; a great bargain.

J. F. JERMAN, Fairfax, Va.

OKLAHOMA

WOODWARD COUNTY

One hundred and sixty Acres Land, Horses, Cattle, Agricultural Implements, Household Furniture.

Fifty-foot front Store Building, which rents for \$480 a year.

House, Furniture, Stable and Eight Lots, rents for \$150 per year in town of Gage

PRICE,

\$8,000.00.

Will exchange for well-improved farm near city or village in Central Virginia.

F. M. COLE,
Shattuck, Okla.

I Can Sell Your Real Estate or Business,
NO MATTER WHERE LOCATED.



Properties and business of all kinds sold quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same.
A. P. TONE WILSON, Jr.,
Real Estate Specialist,
TOPEKA, KAN.

Northern Virginia,

Grain, Fruit, Dairy and Blue Grass Farms of every Class within one hour of Washington, D. C.

LOUDOUN COUNTY
Farms a Specialty
Catalogue on application.

F. B. BUELL & SON,
Real Estate Brokers
Herndon, Fairfax Co., Va.

I Can Sell Your Farm....

If located in one of these Virginia counties: Prince George, Chesterfield, King William, Gloucester, New Kent, King and Queen, Hanover. Send description, stating price.
JOHN JELINEK, 116 Pine Alley,
Bedrock, Pa.

WANTED

We want to buy

Some Good Timberland

(White Oak preferred, but also Pine and other kinds of timber), no matter how large and how small tracts are. **MYER & JEHNE, Farmville, Va.**

Go South.

For full particulars write
A. JEFFERS,
Norfolk, Va.

WITH THE ADVERTISERS.

Canning outfits of all kinds and sizes are offered in this issue by the **Raney Canning Co.**

Star Printing Co. can supply letter-heads, envelopes, etc., at very low prices. Look up the ad. in this issue.

A couple and a half of imported fox hounds are offered for sale by the **Deep Run Hunt Club.**

Parties having good, reliable driving horses for sale will do well to look up advertisement of "Horse" in this issue.

The **White Poultry Yards** are new advertisers in this issue. These yards breed only white breeds of fowls, such as turkeys, chickens, ducks, and guineas.

Slug Shot is being advertised this season by **Benj. Hammond.** Hundreds of our gardeners and truckers are familiar with this insecticide, and to those who are not we would suggest that they look up the advertisement.

Silos, wooden tanks, etc., are offered by **E. F. Schlichter.**

There are some choice offerings of **Aberdeen Angus** cattle in this issue.

The **Clipper Lawn Mower**, advertised elsewhere in this issue, strikes us as being a very sensible machine.

The **Biltmore Farms** have a full-page advertisement in this issue, and to which we invite attention.

The half-page advertisement of **Fetzer & Co.** is sure to interest numbers of our readers.

The **Masters Planter Co.** are offering a splendid plant setter to our readers in this issue. Look up the advertisement.

The **Newark Machine Co.** is advertising its low-down manure spreader in another column.

Absorbine, a well-known horse remedy, is offered in an attractive card by **W. F. Young.**

The **Ruberoid Roofing** is offered by the **Southern Ry. Supply Co.**

R. W. Haw, Jr., is making a special drive on **White Plymouth Rocks** and **Brown Leghorns.**

Some fine bred **Poland China** pigs can be had of **W. B. Payne.**

The **Bowmont farms** are making a special offer of the finest bred **Jersey** cattle and **Yorkshire** pigs.

THE FONTAINE SAFETY TUGS. endorsed by the pastor of the Baptist church, at Roxboro, N. C.

THE FONTAINE CO., Christie, Va.

Gentlemen:—I wish to say that I have been using your "Safety Tugs" on my buggy harness, and find them to all claimed for them in every particular. They are easily the foremost tugs of the age. All travelers should use them, whether traveling much or little. Their worth to the horse in comfort, and the traveler in safety is wonderful.

Yours truly,
G. T. WATKINS.

February 27, 1905.
(See ad. in this issue.)

FOR SALE or RENT

at **JEFFRESS, VA.**

1 store house, 41x22 ft., on lot 50x100 ft., with poultry yard and two stables adjoining 80x100 ft., with blacksmith's shop, stable and buggy shed, all inclosed with poultry wire. I will sell all for \$800, or rent for \$75 per annum. I will sell either lot separately. Also about 90 or 100 acres of land, with cabin, packing house, small stable, etc. About half in wood, branch through it, and two springs. One and a quarter miles of Jeffress. So. R. R., Mecklenburg county, Va. Price, \$800.
G. W. HARDY, Oakley, Va.

WE CAN SELL

YOUR FARM

NO SALE, NO CHARGE.

If you want to buy, write for free catalogue.

R. B. CHAFFIN & CO., Inc., Richmond, Va.

FARM LANDS.

The best locations, choicest lands in Virginia. Grass, Games, Fruit, Poultry, Dairy, Stock. For catalogue and further information, address

Real Estate Trust Co.,
RICHMOND, VA.

FARM WANTED on Shares

With reliable party, by a first-class man, experienced in farming, dairying, butter-making, cattle, sheep, swine, poultry, gardening, flowers, fruits and vegetables. Please give full particulars. **E. B., care Southern Planter.**

Wanted....

VIRGINIA FARMS.

If you have a well located farm you do not need, it will pay you to give me full particulars. Do it at once. **C. E. EVERETT, Hartford Building, Chicago, Ill.**

"In the Green Fields of Virginia."

Homes for ALL; Health for ALL; Happiness and Independence for ALL. ALL sizes of FARMS at corresponding prices, but ALL reasonable.

MACON & CO., Orange, Va.

VIRGINIA FARMS

\$3 PER ACRE AND UPWARDS.
EASY PAYMENTS. CATALOGUE FREE.
GEO. E. CRAWFORD & CO., Richmond, Va.
Established 1878.

OLD VIRGINIA

FARMS of every description. Good lands. Low prices. Liberal terms. Convenient to churches, schools and railroads. A very mild climate. Write for our new catalogue. **CASSELLMAN & CO., Richmond, Va. P. O. Box 257.**

••• VIRGINIA FARMS •••
Nice little poultry farm, 100 acres, good house and orchard, \$600.00. Blue Grass, Stock and Fruit Farms. Address **PORTER & GATRE, Louisville, Va.**

OPIUM

and Whiskey Habits cured at home without pain. Book of particulars sent FREE. **E. W. Woolley, M.D., Atlanta, Ga., 103 N. Pryor St.**

In writing mention Southern Planter

IMPROVE YOUR LAND
WITH
Agricultural Lime
AND
CANADA
HARD-WOOD ASHES.

Let us Quote you Prices on

Strictly Pure Paris Green,

ANY QUANTITY.

PARIS GREEN AND LIME COMPOUND.

We make a specialty of reliable preparations

For Destroying all Plant-Eating Insects.

T. C. ANDREWS & CO.,
NORFOLK, VA.

**Vest Pocket
Fertilizer**

You can carry enough of the right fertilizer in your vest pocket to double ALFALFA or other crops. The right kind is

Nitro-Culture

Simply add harmless food-gathering germs to water, moisten seeds and sow. Crop will be doubled—land greatly enriched. \$2 enough for acre. Results guaranteed or money back. Write for Catalogue 1.

NATIONAL NITRO-CULTURE CO.,
West Chester, Pa.

GINSENG & RAW FURS

Wanted: full value for your goods. Write for price lists. Address H. C. METCALF, Ainstead, N. H.

Mention THE SOUTHERN PLANTER when corresponding with advertisers

MODEL BUGGIES SOLD

"ON TRIAL."

Buggies by the thousands are being shipped all over the country by the Model Carriage and Harness Co., of Cincinnati, Ohio, on one full month's trial. The Company has struck a body blow to the old system of selling vehicles through the middlemen. Its success in dealing with the people direct, giving every vehicle buyer the benefit of the "inside" or wholesale price usually allowed by other manufacturers to the dealers exclusively, shows plainly that the public is tired of being compelled to pay almost two prices for vehicles.

Its experience proves that by means of the big free Model Catalogue of Vehicles and Harness anyone can select just exactly what is desired without having to hunt up a buggy dealer or a harness shop. Just a little common sense and care in filling out the very complete order sheets which are furnished, is all that is necessary.

Even if the buggy or the set of harness ordered shouldn't be just as good as the prospective buyer expected, he is nothing out, as the Company expressly agrees to take back anything that doesn't exactly suit, and refund the money, besides paying freight both ways.

A company that makes such a liberal proposition is going to be exceedingly careful to send the very best goods, and to see that everything is just as ordered. If anything goes wrong the Model Carriage and Harness Co. must stand the loss of freight and other expenses, and lose a sale as well.

The Model Carriage and Harness Company buys only first class material and employs only expert carriage builders. As a result, Model Vehicles are all of uniform high quality.

It will pay anyone who is thinking of buying a buggy or a set of harness to get the big Model Catalogue, which is sent free on request.

The Address of the Model Carriage & Harness Company is 105 Sixth St., Cincinnati, Ohio.

AN ACCOMPLISHED DAUGHTER.

Mrs. B.—"I suppose you find your daughter very much improved by her two-years' stay at college?"

Mrs. Proudmother.—"La, yes! Mary Elizabeth is a carnivorous reader now, and she frequent impoverishes music. But she ain't a bit stuck up—she's unanimous to everybody, an' she never keeps a caller waitin' for her to dress; she just runs in nom de plume, an' you know that makes one feel so comfortable."—Lippincott's.

Wilkes county, N. C., Mar. 10, 1905.

I like the Southern Planter very much and wish it was in the homes and read by every Southern farmer, and if followed, would do more good and advance the interests of the Southern farmer many times more than any other journal or paper he could take.

E. S. Blair.



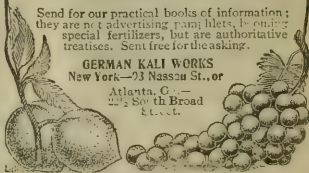
Better Fruits—Better Profits

Better peaches, apples, pears and berries are produced when Potash is liberally applied to the soil. To insure a full crop, of choicest quality, use a fertilizer containing not less than 10 per cent. actual

Potash

Send for our practical books of information; they are not advertising pamphlets, but choice special fertilizers, but are authoritative treatises. Sent free for the asking.

GERMAN KALI WORKS
New York—73 Nassau St., or
Atlanta, Ga.
225 South Broad
Street.



Genuine



Imported

PERUVIAN GUANO,
The Richest Fertilizer Known,

Absolutely pure and from the same islands it came 30 years ago.

No filler nor injurious substances in this guano.

Chincha:	ANALYSES:	Lobos:
9.50 per cent.	Lime	18.50 per cent.
20.50 per cent.	Bone Phosphate	50.00 per cent.
8.30 per cent.	Ammonia	3.60 per cent.
2.00 per cent.	Potash	4.25 per cent.
9.00 per cent.	Phos Acid	23.00 per cent.
28.00 per cent.	Organic Matter and Ammonia salts	13.00 per cent.

Inquire of your DEALER; If he has not got it, write to

SMITH-DAVIS COMPANY,
Wilmington, N. C.

SHIPMENTS FROM } NORFOLK,
WILMINGTON.

**"Crop Growing
and Crop Feeding."**

BY PROF. W. F. MASSEY.
383 Pgs. Cloth, \$1.00; Paper, 50c.

We offer this splendid work in connection with the SOUTHERN PLANTER at the following prices:

Southern Planter and Cloth Bound Volume, \$1.25.
Southern Planter and Paper Bound Volume, 90c.
Old or new subscriptions.

IT'S TIME To Be Up and Doing

"CANADA HARD WOOD UNLEACHED ASHES" being universally used by the most successful farmers, and are said to be the most profitable fertilizer on the market.

Especially fine for improving poor soil, and are continued life to the best. Try them and

Reap a Great Harvest

Don't fail to get our **Specialty Prepared Agricultural Lime**. It is the cheapest and most desirable: is used in many cases in place of Fertilizer:

Virginia Second Crop Seed Irish Potatoes.

\$2.00 Per Barrel.

**WRITE US FOR PRICES
BEFORE BUYING.**

Norfolk Seed Co.,
18 Roanoke Dock, NORFOLK, VA.

RELIABLE SEEDS

REASONABLE PRICES.

...WE ARE HEADQUARTERS FOR...

SELECTED SEED POTATOES,

Second Crop, and Northern Growth.

**SORGHUMS, MILLETS, COW PEAS,
GRASS AND CLOVER SEEDS, RAPE,
SEED CORNS, GAROEN AND FLOWER
SEEDS of the highest quality and germination.**

Send us your orders and you will get
GOOD SEEDS every time.

CATALOGUE MAILED FREE.

**DIGGS & BEADLES,
SEEDSMEN,
RICHMOND, - VIRGINIA**

SEED CORN For Sale, White Salamander Selected.

Matures in 90 days, deep grain, white cob, 15 pounds of shelled corn to 70 pounds of ears. Large ear on heavy short stalk, making splendid fodder. The best corn I have ever used, yielding 12 barrels per acre on medium land. \$1.50 per bushel. Cash with order. F. M. MAGRUDER, Eastham, Albemarle county, Va.

SEED CORN.

I have a fine lot of select Booz's MAMMOTH SEED CORN for sale at \$1.50 per bushel. A. T. BOOZE, Springfield, Va.

MAGAZINES.

Since most readers in picking up a magazine find their attention attracted first by the illustrations, two series of pictures in the April Century may be noted before review of the text: The drawings of Jules Guerin and Andre Castaigne, illustrating Richard Whiteing's "The Chateaux of the Loire" two of Guerin's pictures in color, and Sigismund Ivanowski's ideal portraits of three Tolstol characters, Katia, Mariana, and Anna Karenina.

Among the varied contents of the April Century Mr. Melville E. Stone's story of "The Work of the Associated Press" is, perhaps, of the most general interest. This is the first of a series of articles on the largest news-gathering service in the world, and recounts Mr. Stone's interviews with the Pope, the President of the French Republic, the Emperor of Germany, the King of Italy, and other authorities—interviews which helped to make possible the "A. P.'s" present extensive foreign service. In this issue, too, is the first of two articles by Dr. Anita Newcomb McGee on her interesting experiences as the head of a band of nine American Red Cross nurses in the army hospitals of Japan. Helen Zimmern contributes a seasonable account of the curious ceremony of the car on Holy Saturday in Florence.

America's spreading interest in country estate life has been considered in offering readers of the Century Richard Whiteing's articles on "The Famous French Chateaux." The great castles of the Loire country are ranked of unusual historic interest and architectural beauty, and Mr. Whiteing revisited this region in preparing these articles. The first of them, dealing with Chinon, Cheneceaux and Luynes, is worthily made the leading feature of the April issue. Of decidedly unique interest is "Africa's Appeal to Christendom," written, not by an American or English missionary, but by Prince Momulu Massaquai of Ghendimah, of the British Protectorate of Sierra Leone. The African prince's portrait shows an intelligent and thoughtful face; his words reveal the same qualities. His story, told by the Rev. Josiah Strong, in the introduction, and his appeal cannot fail to interest. There are further chapters of William S. Harwood's "A Wonder-Worker of Science," giving more details of Luther Burbank's important and interesting achievements in plant culture. Brief, but suggestive, articles are on "The Immediate Future of the American College," by Arthur T. Hadley, president of Yale, and on "President Roosevelt as a Reader," the latter making an astonishing showing of books and other reading, whether in amount, range or variety.

There is plenty of humor, with occasional touches of pathos, in the number's varied list of fiction.

Plenty of stories, grave and gay:

10,000 Plants for 16c

More gardens and farms are planted to Salzer's Seeds than any other firm in America. There is reason for this. We own and operate over 1000 acres for the production of our warranted seeds. That you may try them, we make you the following remarkable offer:

For 16 Cents Postpaid

1000 Fine Solid Cabbage,
1000 Rare Lucerne Radishes,
1000 Rich Battery Lettuce,
1000 Splendid Onions,
1000 July Tender Turnips,
2000 Nifty Tender Celery,
1000 Gloriously Beautiful Flowers.

Above seven packages contain sufficient seed to grow 10,000 plants, furnishing bushels of brilliant flowers and lots and lots of choice vegetables, together with our great catalog telling all about Flowers, Roses, Small Fruits, etc., all for 16c in stamps and this notice.

Big 16-page catalog alone, 4c.
JOHN A. SALZER SEED CO.,
La Crosse, Wis.

PAPOOSE POPCORN

A New Seed Discovery for

FORAGE, POULTRY, POPPING

A subscriber to the Southern Agriculturist secured the original seed from an old Indian in Northwest Texas. After experimenting with it seven years he wrote that paper: "With good ground and care it will make from 50 to 100 bushels to the acre, and planted thick and cut stalk and all it will make more feed and better feed than anything I ever saw. The old Indian said poultry fed on it would never have the cholera. I have lost a fowl with cholera since I have been raising it. It also pops beautifully." This article brought hundreds of requests for seed, and now only a few bushels are left. Send 10 cents for a month's trial subscription to Southern Agriculturist, 80 C. P. Bldg., Nashville, Tenn., and you will get 100 seed by return mail; also details of \$50 prize seed-growing contest.

Peas for Sale

2,000 bus. mixed peas, \$1.20
1,000 bus. clay peas, 1 30
500 bus. whippoorwill peas, 1.40
500 bus. soja beans, - - 1.35

Sacked and F. O. B. prices subject to market changes. SEED SWEET POTATOES 75 cents per bushel.

HICKORY MILLING CO.,

Hickory, - - North Carolina.

Roses! Roses!

COLD GROWN, OWN ROOTS, EVER-BLOOMING, and the best of ALL STANDARD roses, including RUNNERS. Write for free catalogue, containing full directions for ROSE CULTURE. We are anxious to please one, and especially those who cannot visit us and make their own selections. MERIT ROSE CO., Richmond, Va.

Cow Peas

For sale; about 700 bushels mixed cow peas mostly CLAY and WONDERFUL. Price, \$1.30 per bushel f. o. b. Hartsville, S. C., cash with order. References, Dun and Bradstreets.

J. L. COKER & CO., Hartsville, S. C.

Albemarle Prolific Seed Corn,

the most successful cross of Cocke's Prolific, 163% bushels shelled to acre.

RED POLLED CATTLE.

POLAND CHINAS.

Mammoth Bronze Turkeys.
Gobbler weighs 5½ lbs. and has taken eight premiums at different fairs and shows.

White Holland Turkeys,

White Plymouth Rocks,

Fancy Barred Rocks,
"RINGLETS"—great prize winners.

Light Brahmans.

EGGS IN SEASON.

ARROWHEAD STOCK FARM,
SAM'L B. WOODS, Prop., Charlottesville, Va.

SEED CORN

Cocke's Prolific and Eureka.

two best varieties known. Seed carefully selected in the field. Lower ears from stalks containing two or more were kept separate. In writing, say whether you want seed from upper or lower ears. See Prof. Massey's report in February number on the "Corn Crop and Its Needs." W. D. Bethel, Wenonah, Va.

Pure-Bred SEED CORN

Limited quantity (selected)
Boone County White

for sale. Write us for prices at once.

PERE WILMER & SONS,

PAULKNER, MD.

OLD-FASHIONED

Peach Blow Potatoes.

\$1 per bushel, bags included

G. W. MOSS, Guineys, Va.

GREAT BARGAIN.

HUBER 10 H. P. THRESHING

Outfit with Saw Mill for sale. Write for particulars. PAUL NEDVIDEK, Holdcroft, Va.

Italian Bees.

The kind that do the hustling. Guaranteed to work on Red Clover. Spring Colonies furnished at \$5 each f. o. b. cars here, in your choice of Root or Dzenbaker hives. The best comb honey hive on earth. Also Root's hives and supplies at Root's prices. Catalogue for the asking. Write me anything you wish to know about bees and their management.

J. E. Thomasson,
Bumpass, Va.

WANTED!

LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Racoons, Foxes, Etc.

DR. CECIL FRENCH,
718 Twelfth St. N. W., Washington, D. C.

Mention the SOUTHERN PLANTER in writing.

several articles of helpful interest, many rhymes, and lots of pictures go to make up the April St. Nicholas. Wilder Grahame's "How Ernest Saved the Herd" is a stirring tale of adventure, and reads like a true story. "The Judgment of Ali" is an old eastern story retold in readable new form by Edward W. Very. Temple Bailey—Is Temple Bailey man or woman?—tells a charming spring story in "Cecily's Easter Hat"; there is another of the delightful "Kalista Wisefellow" stories, "Kalista's Queer Little Dolls," from Mary C. Dillon. Grace MacGowan Cooke tells "The Little Old Story"; and there are new and exciting chapters of "Queen Zixi of Ix," with more pictures in color, and another of the "Pinkey Perkins" stories, "How Pinkey Was Beaten at His Own Game."

But there is much beside fiction in this number. There is a little girl in New York who has trained one of the big elephants in the Central Park Zoo. The story is told by John Z. Rogers. C. F. Holder recounts "An Adventure With a Giant Catfish," which will please the boys; and Silas A. Lottridge, who spends much time in observing birds and in securing their pictures, gives the result of his experiences with "The Great Horned Owl." There is an unusual number of short sketches.

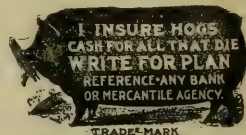
Everybody wants to know what manner of man is the Marquis Oyama, the little old Japanese who, last month, out in Manchuria, won the greatest battle of modern history; what the Lewis and Clark Exposition, about to open, really stands for; how the government got the facts about the beef industry; whether the State of Kansas is putting up a real fight against the Standard Oil Company, or only making a "bluff," what Dr. Osler actually said and actually believes about men over forty and men over sixty; how it happens that the University of Virginia—Jefferson's University—installs its first president on Jefferson's birthday (April 13th) of this year; what are the real issues in the Chicago municipal election; what the trouble is in Austria-Hungary; what Japan's victory at Mukden signifies. All these questions are answered—some in more detail than others—in the Review of Reviews for April. No other magazine of the month treats of these special subjects so fully, or gives so much other useful information on a wide range of timely topics.

Lippincott's Magazine for April opens with a novelette of extraordinary attractiveness to both men and women readers. Its title is "A Fool for Love," its author, Francis Lynde. It deals with a railroad fight in the Far West, and its love interest centres in the chief engineer of the Utah Short Line and a captivating niece of the vice-president of the Colorado and Grand River Railroad, a man other-

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If you do not see beneficial results. Any reader of this paper remitting direct to me for a can or half can of my Hog Remedy at below prices, and giving same a fair trial for 30 days, may at that time have his money refunded if he is not satisfied that his hogs have been benefited, that it will do all that I claim for it, and that it is the best hog remedy he has ever used.

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ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Clifty, Ky.

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These hounds are from the best packs in England, and are among those recently imported by the

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but are found unsuitable for drag hunting.

A rare opportunity for one wishing to enter them in a fox hound pack or for breeding purposes.

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English Bull Terrier,

3 months old for sale. His mother cost \$100. Will sell for \$10 delivered, or will exchange for a pair of pigs of some good breed. D. G. BOND, Edenton, N. C.

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Champion blood of England and America. Puppies now ready to ship. Also bitches in whelp for sale. FARMVILLE COLLIE KENNELS, Farmville, Va.

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Pups, 10 weeks old, for sale. Pedigreed parents. H. G. PURINTON, Rivanna, Va.

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Chestnut horse, foaled 1902, 15.3 hands, weight 1150 pounds. Sired by Squire Rickel, by Cadet, dam Margery, by Rosebery. For terms apply to ANDREW POLLARD, R. F. D. 5, Richmond, Va.

Horses boarded winter or summer. Horses fitted for market or show, colts broken.

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FOR SALE.

The standard trotting bred and handsome individual PRINCE LEO, by Red Leo (2:29½); Prince Rene, dam of Queen Bird (2:29½); tracing six times to Hambletonian, ten and five times to Mambrino Patchen. Address J. P. LUCK, Bedford City, Va., R. F. D. No. 4.

WANTED, A GOOD

Sound Horse

Must be gentle, weigh between 950 and 1100 pounds, and not over 8 years old. Give color, etc. Will exchange NEW UPRIGHT PIANO. "HORSE," care Southern Planter.

wish known as the "Rajah," who has fought his way to the front, and is disinclined to show mercy on "the other fellow." With love and loyalty pointing in different directions, it would be a nice question which to put money on. But, for the comfort of the gentler sex, it may be hinted that the story ends as it should.

"From the Pedestal," by Elizabeth McCracken, is a sweet and clever tale of psychologic trend, placed in Boston, though, for the matter of that, the difference between a man's love of one girl and his worship of another is the same all the world over, not alone at the Hub. "The Man Who Adopted Asia" is a thrilling adventure story of the Far East, from the pen of Will Levington Comfort, whose recent visit to the seat of war has been productive of some very interesting fiction. Arabella Kenealy contributes a bright society story, entitled "Sylvia's Bridegrooms." In it a prospective bride tries her lover's patience to the breaking point. The result is that she is obliged to supply a substitute bridegroom, and, but for a lucky chance, her happiness might have gone under. An unusually successful surprise-at-the-end sort of tale is that by James Drexel Turner, called "A Dreamer." "Miss Sophy's Matrimonial Step," by Luellen Cate Teters, is a humorous picture of country life and a reluctant soldier swain.

Rosa Bonheur's personality possesses such attraction that a reminiscent paper about her under the title, "The Greatest of Women Painters," must meet with much favor. Its author is Theodore Stanton, the son of Mrs. Elizabeth Cady Stanton.

HEAVES—THEIR CAUSE AND CURE

Heaves in horses are largely caused by the abnormal condition of the stomach due to over-feeding, followed by violent exercise on an overtaxed stomach. An animal with indigestion will show a certain amount of distress in breathing and cough more or less, and if allowed to run on will surely develop into a case of heaves.

Newton's Heave, Cough, Distemper and Indigestion Cure is one of the best remedies known, and is a guaranteed cure for the heaves in any stage whatever.

It does the work easily and thoroughly, leaving no ill effects of any kind. It reaches the seat of trouble by its action on digestion and its direct action upon the lungs and their nerve supply.

Horsemen all over the country are enthusiastic in its praise, and no one who values his animal can afford to be without it. For sale at \$1.00 by dealers or by mail or express, prepaid, on receipt of price.

Write the Newton Remedy Company, Toledo, Ohio, for their catalog, containing valuable hints on the care of the horse, sent free to all who write for it.

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Parties wishing to buy a good young Kentucky Jack that has not been spoiled or worn out, should call on or write for catalogue to J. S. TEVIS, Shelby City, Ky. Shipping point, Junction City.

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50 registered MAMMOTH JACKS; some nice JENNETS and SADDLE STALLIONS. Write for catalogue and come to see us before you buy. J. F. COOK & CO., Union Stock Yards, Lexington, Ky.

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Will Exchange

For LARGE JENNET, one good horse-power and mule saw, or pure Red Polled Bull and Heifer Calf. W. S. MOTT, Dixondale, Va.

Stock For Sale.

¾ and 15-16 GRADE ANGUS Bull and Heifer Calves.

1 BULL CALF out of Shorthorn Cow, by Angus Bull.

1 splendid 6 year old BAY MARE, weight 1,200 pounds, quick, active and a good driver. Price, \$150.

1 pair of Blocky, WELL BUILT MULES, 5 years old, well broken. Price, \$300.

Pure Bred POLAND CHINA PIGS, 45 each.

WHITE PLYMOUTH ROCK and SILVER LACED WYANDOTTIE eggs.

W. M. WATKINS & SONS, Saxe, Va.

NOTHING FOR SALE

BUT

Eggs and Setter Puppies.

B. P. R. EGGS, \$1.25 for 13. Most fashionable blind lines Llewellyn Setter Puppies, \$15 each.

Perfectly bred and hunters. THE CEDARS KENNELS, POULTRY AND STOCK FARM, Middleham, Va.

MRS. W. P. ALLEN,

BREEDER OF

S. C. WHITE LEGHORNS, Exclusively.

\$1.00 per sitting of 15 eggs.

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"The hen that lays is the hen that pays"

CHOICE EGGS

for Hatching from HIGH-CLASS STOCK. WHITE WYANDOTTES, Jones' "Invincible" and Baltimore strains. BARRED P. ROCKS, famous Thompson "Ringlets," R. C. WHITE LEGHORNS, "Babcock" strain. From prize-winners and best prize-winning blood. Bred for beauty and utility. Prices to suit and quality the best. Eggs carefully packed in patent carriers. Stock carefully and lightly cared. Prompt personal attention. A few VERY CHOICE COCKERELS for sale yet to quick buyers. Write to-day. E. C. NEWTON, Proprietor Pee Dee Poultry Farm, McColl, S. C., R. F. D. No. 2.

SILVER-LACED
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Orr's strain, strong, healthy, farm-raised birds; fine plumage. Eggs in season at \$1 per sitting of 15. Satisfaction or your money back.

Dr. H. H. LEE,
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RHODE ISLAND REDS,
PEKIN DUCKS and TOU-
LOUSE GESE.

of largest strains. Eggs, \$1 per 15; Duck, \$1 per 13; Geese, \$1 per 6. Good hatch guaranteed. S. C. B. LEGHORN Eggs in lots of 500 or 1,000, cheap. RACKET POULTRY FARMS, A. S. JOHNSON, Mgr., Parksley, Va.

Eggs of Pure-bred

Barred Plymouth Rocks and S. C. B. Leghorns. Prices, 15 for 75c., 30 for \$1.40, 45 for \$2, 100 for \$4. Nothing but fresh eggs shipped. Some nice B. F. R. Cockerels at \$1 each. M. E. ANDREWS, Hurt, Pittsylvania Co., Va.



Barred Plymouth Rocks

from birds that took premiums at Hagerstown, Md., Fair, 1904, \$1.25 per sitting. ADVANCED IDEAS ON TOMATO CULTURE, instructions that insure fine fruit and an abundance of it. 25c. M. KERCHEVAL, Charles Town, Jefferson Co., W. Va.

SAFE GUIDE FOR ADVERTISERS.

The well-known advertising firm of Lord & Thomas, Chicago, New York and St. Louis, has issued the 1905 edition of their "Pocket Directory of the American Press." In compact and convenient form, it gives complete and reliable information regarding the circulation claimed and other data on all advertising mediums published in the United States, its possessions, and Canada, with the latest Federal census. An entirely new and very useful feature is a complete directory of Outdoor Display. This 800-page book is a necessity to every business man who realizes the value of judicious advertising.

THE "SURE HATCH" RECORD.

The Sure Hatch Incubator Company started in a very modest way out at Clay Center, Neb., only a few years ago.

At that time they had a small factory and their output was limited to a few machines, but the success of the "Sure Hatch" was wonderful.

People who bought the "Sure Hatch" soon found that it gave good service, hatched chickens, was easy to run, took little oil and little attention, and yet sold for a lot less money than the older, more complicated machines that did not give as good results.

As a consequence the sales multiplied very fast, and the Sure Hatch Incubator became one of the most popular machines on the market. They have sold over 60,000 of these machines throughout the whole United States; and Clay Center, Neb., is known far and wide as the "home" of the "Sure Hatch."

The Sure Hatch Incubator Company is offering the 100-Egg machine for \$10, freight prepaid. In writing, always address their Clay Center, Neb., office, Box 824, if you live west of the Mississippi, or the Indianapolis, Ind., office, Box 1824, if you live east.

The Scotch Witness.—A small Scotch boy was to give evidence against his father. The magistrate said to him: "Come, now, my man, speak the truth, and let us hear all you know of this affair."

"Weel, sir, dae you ken the coal wharf?"

"Yes;"

"Weel, when you turn the corner you gang up the High street?"

"Yes, my boy, you're very clever."

"Well, you gang on till you come to a pump."

"Yes, yes; I know it — all."

"Weel, you can gang and pump it, for you'll no pump me!"

And the boy departed.

Roanoke county, Va., Mar. 7, 1905.
I do not care to miss a single number of THE SOUTHERN PLANTER, as it is all interesting to me.

W. K. ANDREWS.

In writing mention Southern Planter

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Worth dollars in thousands of homes. Tells you how to treat diseases, feed and care for Poultry with success. It illustrates and tells all about over 45 varieties farm raised THOROUGHBRED FOWLS, and quotes most reasonable prices on stock and eggs. Mailed for 6c. in stamps.

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GEO. E. SHUE.

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S. C. B. LEGHORNS, Exclusively.
WHITE HOLLAND TURKEYS.

NEWLY HATCHED CHICKS, Leghorns Only.

Eggs for hatching: Leghorns, \$1 for 15, \$5 per 100. Turkey Eggs, \$2.50 for 10, \$10 for 50. Newly-hatched chicks, \$10 per 100, \$5 for 50. Chicks two weeks old \$15 per 100, \$5.50 for 50. Breeding stock all first class. Free range. Prompt shipment. Square dealing and safe delivery guaranteed. CAL. HUSSELMAN, Richmond, Va., R. 6.



Valley Farm.
S. C. B. Leghorns.
(FORSYTH STRAIN)
BARRED ROCKS.

Eggs for sale from as fine matings as can be found.

CHAS. C. WINE,
Mt. Sidney, Va.

EGGS AND FOWLS.

BARRED, BUFF and WHITE PLYMOUTH ROCKS; SILVER, WHITE, BUFF and PARTRIDGE WYANDOTTES; BLACK MINORCAS; BLACK LANGSHANS; LIGHT BRAHMAS; BUFF and PARTRIDGE COCHINS; WHITE and BROWN LEGHORNS.

EGGS, 15 for \$1; two-thirds hatch guaranteed or sitting duplicated at half price. OAKLAND POULTRY FARM,
C. J. WARINER, Mgr., Ruma, N. C.

BARRED PLYMOUTH ROCKS,

PARTRIDGE COCHINS. B. B.

RED GAMES, S. C. WHITE and

BROWN LEGHORNS, S. C. RHODE

ISLAND REDS, choice stock, for

sale. Eggs \$1 for 15; \$1.75 for 30.

RIVERSIDE POULTRY FARM,

J. B. Coffman & Sons,

R. F. D. 19, Dayton, Va.



EGGS :-:

WHITE HOLLAND TURKEY

at 20 cents each.

PEKIN DUCKS, \$1.00 per dozen.

WHITE GUINEA, WHITE WYANDOTTE and S. C. WHITE LEGHORN, \$1.00 for 15.

WHITE POULTRY YARDS, Lorraine, Va.

BARRED PLYMOUTH ROCK

Eggs, \$1 for sitting of 15. Splendid stock. fine layers. F. MAXWELL CONNER, Box 316, Richmond, Va.

PRAIRIE STATE INCUBATORS AND BROODERS

Measure their success by the success of users. Twenty incubators sold first year; 20,000 sold in 1903. Went all over the world. Winners of 385 first prizes. Write for our FREE catalogue.

PRAIRIE STATE INCUBATOR CO.,
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Richmond's Best Breeds

won at Hagerstown, Richmond and Atlanta. Eggs from prize winning

WHITE, BUFF and BROWN LEG-HORNS, WHITE and BLACK MINORCAS, B. P. ROCKS.

FLYING HOMER PIGEONS,

each variety raised by a SPECIALTY BREEDER on his own yard. C. G. M. FINK, R. F. D. 2, Richmond, Va., representing Richmond breeders.

HIGH-CLASS

BUFF WYANDOTTES.

EGGS FOR HATCHING,
\$1 per 15; \$2.75 per 50; \$5 per 100
All eggs guaranteed fresh and true to name.

PULLETS \$1.25 each.
COCKERELS \$2.00 each.
Muddy Creek Poultry Farm.
W. M. HEATWOLE, Hinton, Va.



Golden Wyandottes

EXCLUSIVELY.

Eggs for sale from this GRAND STRAIN OF WINTER LAYERS at \$1.00 per sitting of 15.

MISS KATIE THOMPSON,
NEVERLET, VA.

White Wyandotte Eggs FOR HATCHING.

When you are needing Eggs, and want them to hatch, write me. I have discarded all others for this valuable breed.

Incubator Eggs furnished on short notice.

G. F. POINDEXTER,
Breeder of White Wyandottes,
Greencle, Rockbridge Co., Va.



EGGS FOR HATCHING.

\$1 for 15. Black Minorcas, Black Langshans, Barred and White Rocks, Light Brahmas, S. L. C. Wyandottes, S. C. W. Leghorns, S. and R. C. B. Leghorns. A few more S. L. Wyandotte cockerels for sale, \$1 each. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

Black Minorca

Eggs for sitting, \$1 for 15, \$4.50 per 100. A. C. THROCKMORTON, Surprise, Culpeper Co., Va.

HINTS BY MAY MANTON.

FANCY WAIST WITH SHIRRED BELT 4965.

Full waists made with waist coat effects, are among the favorites of the incoming season and always allow of effective combinations. This one is more than commonly attractive and is made of chiffon veiling, the collar and belt being of chiffon taffeta, and the chemisette and cuffs of lace but all the materials that shirr satisfactorily are equally appropriate. The sleeves make special features, and are shirred to form two puffs, the shirrings being so arranged as to reduce the apparent width of the figure. The belt also is worthy of note and is arranged over the waist, closing with it at the front.

The waist consists of the lined lining, which is closed at the centre front, back, collar and chemisette with



4965 Fancy Waist, 32 to 40 bust.

the belt. Both the fronts and the belt are arranged in tuck shirrings at the front edges and are closed invisibly and the waist is shirred at the shoulders and gathered at the waist line, the opening being finished with the shaped collar, which, in the case of the model, is embroidered. The sleeves are mounted upon foundations that are laced to form cuffs.

The quantity of material required for the medium size is 4 1-2 yards 21, 3 3-4 yards 27 or 2 yards 44 inches wide, with 1 1-4 yards of silk for collar and belt and 1 1-8 yards of all-over lace for chemisette and cuffs.

The pattern 4965 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure.

The sleeves make the all important feature of the season's gowns and waists. If they be correct the style of the garment is assured even though other details may not be of the latest. These excellent models are well adapted to the remodelling, which is

Buff Orpingtons

Exclusively.

We breed exclusively SINGLE COMB BUFF ORPINGTONS of the bestest class. Our birds were hatched from eggs from imported fowls, and they are buff to the skin. We have been breeders of pure bred fowls for seven years, and have discarded all for the "Orpington," as we believe they are the greatest fowl to-day.

We are now booking orders for eggs, 15 for \$1.50, 30 for \$2.75. We have a few cockerels left from imported fowls \$1.50 to \$2 each. Send for circular. Address and make all orders payable to B. O. POULTRY YARD, Mitchell, Va.

BUFF ORPINGTONS

We have a few cockerels left at \$1.50 and \$2 each. No pullets. Eggs, \$1.50 for 15, or \$4 for 50. Black Langshans in pairs and trios or half dozens at \$1 each. Eggs, \$1 for 13, or \$7 per hundred. Shipping point, Jeffers, Va., Southern Ry. G. W. HARDY, Oakley, Va.

BUFF ORPINGTON

Eggs for all at BIG REDUCTION. 15 Eggs, \$1, or \$8 per 100. This is a farm raised stock of 75 beauties, headed by second prize Augusta, Ga. 1904, Cockerel. All Solid Buff. 10 very fine Pullets yarded and headed by a first prize Augusta, Ga. 1904, Cockerel. A few eggs from this select pen at \$2 per 15, or \$5 for 30. A few Cockerels at \$1. Pedigreed POLAND CHINAS; young pigs and bred sows. OCONNECHEE FARM, Jeffers, Mecklenburg Co., Va.

Eggs for Hatching.

BUFF ORPINGTONS.

\$1.25 for 15.

Will spare a few COCKERELS.

GASTON FARM, Somerset, Va.

Huguenot Orpingtons

Imported from Wm. Cook's yards, England. Eggs, \$3 for 13. Stock from Eastes' Importation. Eggs, \$1.50 for 13. MOTTLED ANCONAS, eggs \$1.50 for 13. B. and W. WYANDOTTES, eggs, \$1 for 13. All winter layers. A few pure Oakshade M. B. TURKEY TOMS at \$4 each. HUGENOT POULTRY YARDS, Dublin, Va.

EGGS Buff Orpingtons. S. C. White Leghorns. Pekin Ducks

Remember, I guarantee absolute satisfaction in both stock and eggs. Price \$1 to \$2 per sitting.

Don't you need a choice BERSHIRE PIG? I take pleasure in answering all letters same day received. Can fill orders promptly.

F. M. KING

Hagan, R. F. D. No. 2 Lee county, Va.

S. C. Buff Orpingtons.

Unsurpassed in beauty, quality and utility. Birds of beautiful golden buff, and not a black feather in the lot. Eggs, \$1.50 per 15. N. B. CRUDUP, Oakley, Va. Station, Jeffers, Va.

30 S. C. B. LEGHORN

Eggs, \$1; \$3.25 per 100. Barred or W. Rock black, \$1 per 15 or \$5 per 100. Catalogue free. J. D. STODGHILL, Route 4, Shelbyville, Ky.

A FEW CHOICE

Barred Plymouth Rock

Cockerels, pairs, trios and pens. Mated for best results. B. P. R. EGGS by the sitting or hundred; also PEKIN DUCK EGGS. I have been in business for 17 years, and my birds are high bred and give satisfaction, which I guarantee. CHARLIE BROWN, Arlington Farm, Cartersville, Va.

**-BARRED-
PLYMOUTH ROCK EGGS**

\$1 for 15.

My yards contain the same blood as the world-renowned prize-winners, and I can furnish either THOMPSON or HAWKINS strain.

Address C. DANNE, Jr., Proprietor or JOHN MAHANE, Manager, Trevilian, Va.

**Barred Plymouth Rocks
EXCLUSIVELY.**

A superior strain of heavy layers. Eggs, \$1.25 per fifteen. Stock for sale. A. F. BERGER & SON, R. F. D. 3, Richmond, Va.

Barred Plymouth Rocks

-AND-

S B. C. Leghorns,

laying strains. A few more grand Cockerels for sale. Satisfaction guaranteed. Mrs. JNO. F. PAYNE, Clairmont Dairy Farm, University of Virginia.

PURE BRED

BARRED PLYMOUTH ROCKS,

exclusively. Strong, healthy, vigorous farm raised stock, bred for laying. Eggs, 75c. for 15. WM. B. LEWIS, Irby, Nottoway Co., Va.

B. P. R. EGGS

from best strains, farm grown. No other breed kept. New blood annually. 50c. per sitting of 15. \$3 per hundred delivered, securely packed, f. o. b. In Bedford City, Va. Mrs. WM. P. BURKS, R. F. D. No. 1, Bedford City, Va.

Barred Plymouth Rock

EGGS for hatching, carefully packed \$1.00 for 15; \$1.75 for 30; \$2.25 for 45 and \$4.00 for 100.

MRS. CLARA MEYER, Farmville, Va.

Barred Plymouth Rock Eggs

from our noted laying strain, judiciously crossed with McClave, Hawkin, Bradley Bros., Thompson, and Biltmore males, \$1.50 and \$2.00 per fifteen. LESLIE D. KLINE, Vaulause, Va.

Barred Plymouth Rock Cockerels.

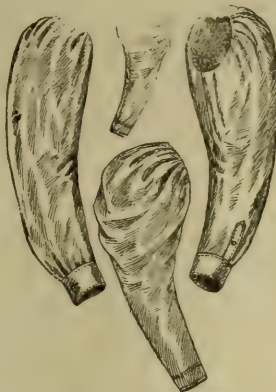
Thompson, Bradley Bros., and Hawkins strains, at farmer's prices. Eggs for hatching. DUROC-JERSEY pigs from best registered stock. LESLIE D. KLINE, Vaulause, Va.

This May Interest You.

♥♥♥ My **BARRED ROCKS** ♥♥♥
Are stock improving, blue-barred-to-skin kind. Closely related to New York Prize Winners. Eggs in season. L. W. WALSH, Box 194, Lynchburg, Va.

so often necessary, as well as to the new garments, and give the very newest and smartest models. As illustrated the material is white linen but the designs are suited to all seasons.

The shirt sleeve is made in one piece, with an opening finished with an over-lap and is gathered at both edges, finished at the lower with a straight cuff. The "lego" mutton" sleeve also



4967 Blouse or Shirt Waist Sleeves,
Small, Medium, Large.

is in one piece but is plain at the wrist, full at the shoulder.

The quantity of material required for either sleeves is 1 3/4 yards 21, or 27 or 7-8 yards 44 inches wide.

The pattern 4967 is cut in three sizes, small, medium and large, corresponding to 32, 36 and 40 inch bust measure.

We furnish the above patterns at 10 cents each..

SOUTHERN PLANTER,
Richmond, Va.

Epitaph on John Adams, of Southwell, a carrier, who died of drunkenness:

John Adams lies here, of the parish of Southwell,

A carrier, who carried his can to his mouth well.

He carried so much, and he carried so fast,

He could carry no more, so was carried at last,

For the liquor he drank, being too much for one,

He could not carry off, so he's now carrion.

Dinwiddie county, Va., Mar. 7, 1905.

I think the Southern Planter the best farm paper I ever saw for this country.

O. H. PALMER.

Vance Co., N. C., March 20, 1905.

"I would not do without the Southern Planter for twice the amount."

GEO. TARRY.

♥♥♥ EGGS FOR HATCHING. ♥♥♥

15 for \$2.
B. P. Rocks (Bradley Bros. birds), worth \$6 sitting
Also S. C. B. Leghorns, 15 for \$1.50.

Our birds in respect to size, beauty of mark and as layers, are the finest to be found anywhere without exception. From stock that has taken more first prizes than any birds in this country. Try a sitting. Stock for sale. STRAWBERRY HILL POULTRY YARDS, Box 287, Richmond, Va.



E. F. SOMMERS, - Somerset, Va.

Breeder of the finest line bred

Barred Plymouth Rocks

exclusively for 15 years. Write to me for what you want. Am sure can please you. My birds have been bred for laying qualities as well as shape and plumage. Cockerels and pullets, \$1 to \$2; eggs, \$1 per set of 15; 2 sets, \$1.50; M. B. Turkey eggs, \$3 per doz.

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from pure bred poultry-Barred Plymouth Rocks, Rose Comb Rhode Island Reds, Buff Orpingtons, White Wyandottes, S. C. White Leghorns. Fine lot of Cockerels and pullets for sale. RIVERSIDE POULTRY YARDS, O. H. SHOOK, Prop., R. F. D. 1, Eutola, N. C.

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Cockerels and eggs; also pure bred CHESTER WHITE PIGS. JOHN A. CLARK, Malvern Hill, Va.

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Fine pure bred chickens and eggs for sale cheap. L. B. SEMONES, Callands, Va.

Send for Free Descriptive Catalogue of Thoroughbred Poultry.

Description of 10 varieties best poultry-Langshans, Orpingtons, Leghorns, Wyandottes and Buff Rocks. Satisfaction guaranteed. Send to-day. Mention Southern Planter. Address JOHN S. WENGER, Dayton, Rockingham Co., Va.

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FOR HATCHING.

TOULOUSE GERSE EGGS \$1.50 per 7.
WHITE WYANDOTTES, \$1.00 per 15.
S. C. BLACK MINORCA, \$1 per 15.
BARRED P. ROCKS \$1.00 per 15.

No better anywhere.

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Highland Springs, Va.

**Brushy Hill Poultry Yard**

offers eggs for hatching of the following breeds at right prices: BUFF ORPINGTONS, S. C. WHITE and BROWN LEGHORNS, WHITE WYANDOTTES, SILVER SPANGLED HAMBURGERS and GOLDEN LACED WYANDOTTES. Barred Plymouth Rock eggs, 20 for \$1. O. E. SHOOK, Prop., R. F. D. 1, Vaughn, N. C.



S. C. W. LEGHORNS EVERLASTING LAYERS.

Cock direct from Wyckoff, mated with pullets hatched from Wyckoff eggs; positively no inbreeding. Eggs \$1 for 15. 3 Cockerels for sale from above hatch. \$1.50 each. "There's more in the strain than in the breed." Address
COTTON VALLEY FARM,
Box 183, Tarboro, N. C.

A FEW

S. C. White Leghorn

Pullets and Cockerels for sale. A trio for \$4. Eggs at \$1 per sitting of 15, f. o. b. here. **PRICE & PRICE, Prop., Green Bay Poultry Yards, Green Bay, Va.**

SINGLE COMB

WHITE LEGHORNS

exclusively. Eggs for sale from this grand strain of winter layers at \$1.50 per sitting of 15; \$7.50 per 100. Cockerels, \$1.50; Pullets, \$1.25. Eggs half price after June 1st. **JNO. A. ELLETT, Emmetts, Va.**

S. C. White Leghorns EXCLUSIVELY.

We have the great laying strain of White Leghorns. We keep the best blood and never inbred; they are fine in size, and pure white. We are booking orders for eggs, 15 for \$1; 30 for \$1.75; 100 for \$5. A few cockerels for sale, \$1 each. Address **HIGHLAND VIEW FARM, Mitchell's, Va.**

EGGS FOR HATCHING.

SINGLE-COMB WHITE LEGHORNS.

SINGLE-COMB BROWN LEGHORNS.

Bred from the greatest laying strains in the country.

\$1.00 for 15.

STRATHEDEN POULTRY FARM, Embro, N. C.

S. C. W. Leghorn

(Blitmore prize winning strain) and **BARRED PLYMOUTH ROCK** eggs for sale. 75c. for 15 or 3 sitting for \$2. Satisfaction guaranteed. **Mrs. F. E. WILLIAMS, Charlottesville, Va.**

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Breeders of prize winning strains of **S. C. White and Brown Leghorns.** Eggs, \$1.00 for 15; \$5.00 for 100.

S. C. White Leghorn

Eggs for Hatching. Thoroughbred to say in winter. The hens are beauties, and so are the eggs. \$1 per setting of 15. **MISS MARIA BROWN, Cartersville, Va.**

Eggs for Sitting.

B. & W. S. C. Leghorn eggs. \$1 for 15; also young cockerels \$1 each, for sale. **P. J. HOLMES, Ivor, Va. N. & W. R'y.**

GOOD HOUSEKEEPING.

Beef Pie.

This is a good substitute for chicken pie, and will make a variety in the dinner meat. The left-over from a roast or boiled piece can be used, and if you happen to have a few scraps of ham it will add a pleasant flavor. Cut up the beef and put the bones into a stewpan with enough water to cover and let them boil hard. This makes the gravy. Make a rich biscuit dough, roll it half an inch thick and line the pie dish with it, set it in the stove to cook until nearly done, then arrange the meat in it and put a layer of slices of hard-boiled eggs; then butter and pepper and salt; then pour over it enough gravy to cover well; then sprinkle a layer of flour over and put on the top crust. Let it bake slowly until a rich brown and serve hot.

To Cook Asparagus.

When the asparagus is brought in scrape the hard part of the stalks well and lay in salt water (not very salty). About an hour before dinner put it into a pan and cover with boiling water; it will take about half hour to cook; then drain off the water and pour over it milk enough to cover, beat up a large tablespoon of butter with two tablespoons of flour and stir it in, add enough pepper and salt, and let it simmer. Arrange the asparagus on slices of toast and pour the sauce over it; serve at once.

Asparagus Salad.

Select the asparagus for this having the pieces a uniform length and tender. Boil it for half hour in slightly salted water and then drain off the water and set the asparagus in the ice box. Serve cold with mayonnaise, arranging half dozen stalks on a plate with lettuce leaves and putting a spoonful of the dressing on each plate. The canned asparagus is good used this way.

Spinach for Breakfast.

Pick the spinach over carefully and wash each bunch separately, to be certain of removing all grit. Let it soak for a while in clear cold water and then throw it into boiling water and boil till tender. Drain off the water and pour over it a cup of cream, butter, pepper and salt, stir for five minutes, then serve at once. If you prefer, leave out the cream and dress it with hard-boiled eggs, pepper and salt.

Baked Onions.

Boil the onions until tender in salt water, then arrange them in a baking dish, cover with bread crumbs, pepper and salt and butter, and moisten the whole with milk. Set it in the stove and let it brown.

Stewed Potatoes.

These are better if boiled whole the day before, and when cold cut into dice or slices, put on the stove in a granite pan and pour over them al-

EGGS FOR SITTING

From pure bred **WHITE WYANDOTTES** and **BUFF PLYMOUTH ROCKS**. \$1 for 15, or \$1.75 for 30. **DIAMOND POULTRY FARM, S. W. PULLIAM, Prop., King, N. C.**

Eggs For Sale

Mammoth Bronze Turkey eggs, 15 for \$4. Banded Plymouth Rock chicken eggs, 15 for \$1.50. If you wish to secure stock of the best of these strains send in your order early. I am unable to supply the demand each year. **PIEDMONT POULTRY PLACE, Miss E. CALLIE GILES, Prop., White's Depot, Va.**

"Business Fowls."

That is What Ours Are.

S. C. WHITE and BROWN LEGHORNS, WHITE WYANDOTTES, BARRED PLYMOUTH ROCKS. Eggs for hatching, \$1 per 15. Guaranteed pure and true to name. **PIEDMONT HEIGHTS FARM, F. C. LOUHOFF, Propr., Yancey Mills, Va.**

S. C. B. Leghorn

Eggs for sale. Sitting of fifteen, 75 cents; thirty, \$1.25. We make prompt shipment. Send us your order; it will be our pleasure to please you. **THE LEGHORNS ARE THE BEST LAYERS.** Order a sitting and get in the stock. We have not had a complaint from a customer this season. **MEHRING POULTRY FARM, Branchville, Va.**

EGGS FOR HATCHING.

Echo Farm Poultry. Single Comb Brown Leghorns exclusively. Best laying strain. White Holland Turkeys, from prize winners. Eggs, Leghorns, \$1 for 15; \$6 per 100. Eggs so far 90 per cent. fertile. Turkey eggs, \$2.50 for 10; \$10 for 50. Prompt shipment. The Golden Rule is my motto. **CAL. HUSSELMAN, Richmond, Va., R. 6.**

S. B. C. Leghorn

Cockerels at \$1. They are perfectly bred. Could be no better. Orders booked for eggs. 15 for \$1. Seed Potatoes for sale. **W. S. GUTHRIE, Childress, Va.**

Rose Comb

WHITE LEGHORNS and WHITE WYANDOTTES for sale. Good stock. Eggs in season. \$1 for 15. **J. W. NICHOLS, Greve, Va.**

EGGS White Holland Turkey, \$2.50 per dozen.
White Plymouth Rock, 75c. per 15.
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LANDOR POULTRY YARDS, Croxton, Va., offer for sale eggs of **M. BRONZE TURKEYS and BARRED PLYMOUTH ROCKS and WHITE WYANDOTTE** chickens. Book your orders now. **MISS CLARA L. SMITH.**

EGGS! :-: EGGS!

Rose Comb White Leghorns are the best of eggs winter and summer. Eggs, \$1 per 15; \$4 per 100. White Holland Turkey eggs, \$2 per 10. **MRS. LIZZIE DYER, Versailles, Tenn.**

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Black Devils and Red Cubans.

Where they won, Sharon, N. Y., 4 out of 5. Blue Rock, Pa., 3 out of 5. Clarion, Pa., 5 straight. Roanoke, Va., 1 out of 3. Akron, Ia., 2 straight. Eggs, \$2 per sitting. Young trio, quail size, \$3.

THOS. W. JARMAN, Yancey Mills, Va.

FANCY PEACOCK

FOR SALE

We have several trials of fine birds which we can offer at reasonable prices. Cocks have fine plumage.

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Well bred and fine singers.

Mrs. L. G. SMART, Bedford City, Va.

BERKSHIRE PIGS.

High bred Berkshire pigs at Farmer's prices.

EGGS.

S. C. Brown Leghorn eggs from choice birds, 75c. per 15. EVERGREEN FARMS, W. B. GATES, Propr., Rice Depot, Va.

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Still has a few 5 mos. old

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Now booking orders for April and May shipment of Stock that is as good as the best. B. P. Rock and S. C. B. Leghorn eggs for sale, \$1 for 15. J. T. OLIVER, Propr., Allens Level, Va.

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POLAND-CHINAS.

1 beautiful sow 9 months old; some else pigs later. A fine GUERNSEY BULL CALF, 1 year. Grand dam tested 348 pounds butter in 1 year. Also S. C. B. Leghorn and W. Wyandotte eggs at \$1 per 15. F. M. SMITH, JR., R. F. D., 4, Charlottesville, Va.

POLAND CHINA PIGS (Noted Strain.)

BARRED ROCK EGGS, 2.50 per 100. CHAS. M. SMITH, Rogersville, Tenn.

REGISTERED

POLAND - CHINAS.

for sale. A 200-lb. Boar and 150-lb. Sow with pig, no kin, at \$15 each to a quick buyer. Box 405, Richmond, Va.

POLAND-CHINA

BARGAINS.

Pigs from reg. stock, dandies, 3 mos. old, \$4; 2 for \$7.50. If taken now; a year-Boar at \$12, worth \$20. Owing to other my stock. Holt's Strawberry Seed Corn, \$1 per bu. this month. Send check and get what you want. W. B. FAYNE, Crofton, Va.

business, must reduce my stock. Holt's Strawberry Seed Corn, \$1 per bu. this month. Send check and get what you want. W. B. FAYNE, Crofton, Va.

Registered P. Chinas Berkshire C. Whites. Large strain. All ages mated not skin, 8 week pigs, bred sows, service boys, Guernsey calves, Scotch Collie pups, and Poultry. Write for prices and free circulars.

F. F. HAMILTON, Cochransville, Chester Co., Pa.



most enough milk to cover. Let them stew a few minutes, then add salt, pepper and a lump of butter creamed into double as much flour; they must boil up once and be served hot. This is a good breakfast dish, and especially good for supper.

Stewed Eggs.

Boil the eggs hard, about fifteen minutes, throw them into cold water and peel off the shell, cut them into four or five pieces and put them into a pan, pour over them a sauce made of one pint of milk, two tablespoons of flour and one tablespoon of butter, salt and pepper, and, if you like it, a few drops of onion juice. Let them boil and serve at once. Eggs go further cooked this way, and are delicious.

Layer Cake.

One pound of flour, half pound of sugar, half pound of butter, one cup of milk, one teaspoon of soda, two teaspoons of cream of tartar, six eggs. Beat the yolks, add the sugar, and beat well, then add the butter creamed and beat hard. Sift the flour with the soda and cream of tartar in it, three times, add the milk, then the flour, then the whites of the eggs beaten stiff and bake in layers. Spread a boiled icing between the layers and ice the tops and sides.

A very nice filling for any layer cake is to mash the required number of fresh strawberries, sweeten well and put between the layers, ice and use the day it is made, else it will sour. Pineapples grated and used as a filling in the same way, or else beaten up with a boiled icing, make a delightful cake.

Mixed Fruit Ice.

Five lemons, six oranges, the rind of both grated off and used, six bananas crushed and three cups of grated pineapple, three pounds of sugar, enough water to fill a two-gallon freezer. Dissolve a half box of gelatin in a part of the water and let it boil up once, add it hot to the fruit and freeze at once.

Gooseberry Jam.

Use the green fruit for this, top and tail them and put them in a brass kettle, if you have one, making sure that it is perfectly clean, by rubbing first with vinegar and salt and then with ashes, put in enough water to come within a few inches of the top, add a pinch of soda and let them boil to rags. The fruit must be weighed, and to each pound allow a pound and a quarter of sugar and do not add the sugar until the fruit is nearly done, then boil till thick.

CARAVEN.

Loudoun county, Va., Mar. 13, 1905.

Could not get along without the Southern Planter.

J. R. SKINNER.

Bedford Co., Va., March 20, 1905.

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\$360 NET PROFIT

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One Hundred Pounds will make you \$18.00 net profit. "International Stock Food" will make you \$18.00 net profit. It is known everywhere. It is prepared from high class powdered Roots, Herbs, Seeds and Grains and purifies the blood, tones up and permanently strengthens the entire system, cures and Prevents Disease and its remarkable aid to Digestion and Assimilation so that each animal will gain more pounds from all grain eaten. We positively guarantee that one ton of "International Stock Food" will make you \$360.00 net profit, over its cost, in extra growth and Quick Fattening of Cattle or Hogs in Winter-Spring, Summer or Fall, and at the same time keep your stock Healthy and Extra Vigorous. Guaranteed to Fatten Your Stock in 30 Days less cost you want "International Stock Food" is splendid for all kinds of Breeding Stock and is universally acknowledged as the leading high class medicated stock food of the world. It is equally good for Horses, Cattle, Sheep, Hogs, Cows, Calves, Lambs and Pigs. Endorsed by over Two Million Farmers and One Hundred Thousand Dealers who always sell it as "Spot Cash Guarantee" to refund your money if it ever fails for any recommended use. Guaranteed to Fatten 3 Quarts of Oats Every Day for Each Cow, Carriage or Driving Horse. The \$18.00 Champion. One Tenth 15c, sets "International Stock Food" Every Day.

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If you Name The Paper and State the Number of Stock You Own we will mail you FREE a Beautiful Colored Lithograph of our World Famous Champion Stallion Dan Patch 135. His printed in 6 brilliant colors and is 21 by 28 inches. See our Large Advertisement Write Direct to Our Office. We employ thousands of men with 125 writers and all correspondence is answered promptly.

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Large, mellow, easy keepers.

Bred right and runs true.

SUNSHINE, U. S. PERFECTION and TUCUMSEH blood.

A few Spring pigs of both sexes, eligible to registry, for sale. M. B. Turkey eggs, \$2 per dozen.

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Duroc Jerseys

PAUL J., 21625, heads the herd, with such sows as LULIE'S PET, 40434, BELLE OF SALT POND, 70464, and LADY OF VIRGINIA, 70466. Young stock for sale. S. A. WHITTAKER, Hopewell, Va.

Duroc Jersey Pigs

from prize winning stock, at farmer's prices. Write for list. LESLIE D. KLINE, Vaucluse, Va.

IMPROVED CHESTER WHITES.

I am now booking orders for spring pigs at reasonable prices. I will also sell S. L. Wyandotte and Black Langshan eggs at \$1 per sitting of 15; two sittings, \$1.75, or three for \$2.50. Address A. J. LEGG, Albion, Va.

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Best hog on earth at farmer's prices. S. M. WISECARVER, Rustburg, Va.

BERKSHIRE PIGS

eligible to registry at one-third ordinary prices. W. W. DILLMUTH, Blackstone, Va.

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A fine lot of spring pigs ready to wean from my great brood sows, BILTMORE QUEEN and HIGHCLERE LADY, by the great herd boar, PULASKI CHIEF. Price, \$5 each if taken quick. Also 4 young INDIAN GAME hens and a nice cockerel. The five for \$25. B. E. WATSON, Pulaski, Va.



Sire Rotlers John Bull No. 65019, Dam Exiles Mary D. No. 17202, Exiles Mary D. 2d, dropped Nov. 27, 1903. ENGLISH BERKSHIRES. Stock from parents that have sold for \$1,020. Two litters farrowed Dec. 30, 1904 and March 3, 1905. Price, &c., upon request. COTTAGE GROVE FARM, P. O. Box 17, Greensboro, N.C.

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BERKSHIRES.

Am offering pure bred pigs at reasonable prices. Either sex. Pedigree furnished with each pig.

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We have two imported boars and eight imported sows, the cream of the greatest English herds; also animals combining the choicest English blood with that of American champions. Pigs from imported and from English-American animals for sale. DR. J. D. KIRK, Roanoke, Va.

Berkshires.



Pigs farrowed from 3 reg. sows, by Mason of Biltmore II, &c. 548. Ready for delivery after May 19th.

\$5 each; \$10 pair.

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I offer some exceedingly choice young boars for sale; by imported Danesfield

Tailor, 76940 and out of Biltmore bred sows. It will be hard to find better or cheaper stock.

HENRY WARDEN, Fredericksburg, Va.

The Large Black

breed of hogs is an

Old English Breed,

... NOTED ...

for lean meat, size, bone, PROLIFICACY and early development. They will cross well with our native breeds. Young stock from my Imported Sows for sale cheap. I pay express, write me at once if you want something really choice. T. L. SPRINGER, Florence, Pa.

YANKEE INVENTIONS.

In a little Massachusetts town lives a man who for two causes enjoys deathless local fame. For one thing, he is the only native of the place who has been to Europe; and he, moreover, performed while there the ensuing feat, which the neighbors still recount with breathless admiration:

While in Rome the New Englander was shown a certain shrine, before which burned a solitary taper.

"That taper," explained the guide in machine-built English, "that taper he has burned before this shrine seven hundred years. He a miraculous taper. Never he has been extinguished. For seven long century that taper has miraculously burn before our shrine and not once has he been—what you call—'put out.'"

The Yankee viewed the miracle-candle in silence for a full minute. Then, leaning slowly forward, he extinguished the flame with one mighty "puff."

Turning with a triumphant chuckle to the scandalized and speechless guide he announced calmly: "Wa'al, it's aout now!"—Lippincott's.

EARLIEST GREEN ONIONS.

The John A. Salzer Seed Co., La Crosse, Wis., always have something new, something valuable. This year they offer among their new money making vegetables, an Earliest Green Eating Onion. It is a winner, Mr. Farmer and Gardener!

Just send this notice and 16 cents and they will send you their big plant and seed catalog, together with enough seed to grow 1,000 fine, solid Cabbages; 2,000 rich, juicy Turnips; 2,000 blanching, nutty Celery; 2,000 rich, buttery Lettuce; 1,000 splendid Onions; 1,000 rare, luscious Radishes; 1,000 glorious brilliant Flowers. In all over 10,000 plants—this offer is made to get you to test their warranted vegetable seeds, and all for but 16 cents postage, providing you will return this notice, and if you will send them 26 cents in postage, they will add to the above a big package of Salzer's Fourth-of-July Sweet Corn—the earliest on earth—10 days earlier than Cory, Peep o' Day, First of All, etc.

ALL TO HERSELF.

One morning Mr. W.'s coachman was very late in getting to work, and on being questioned for an explanation of his tardiness, he said:

"To tell you de truth, Boss, I dun got mah'led dis maw'nin', and dat's huccome it I got late."

"Well, Jim," his employer said, "where is your wife, and why are you not off on your honeymoon?"

"Lord, Boss," said Jim, "she's dun gone off on de honeymoon; she hab all de money."—Lippincott's.

Franklin county, Va., Mar. 11, 1905.

I am not willing to do without the Southern Planter.

GEO. B. COOPER.

PLEASANT VALLEY STOCK FARM Shorthorn

calves from fine milking stock.

Yorkshire Pigs

of prolific breed.

JAMES M. HOGE, Hamilton, Va.

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Thoroughbred Horses

Pure Southdown Sheep and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,
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Short-Horn Cattle

AND POLAND CHINA PIGS

FOR SALE at low prices. Call and see my stock or write me. A. J. S. DIEHL, Port Republic, Va.



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SHORT HORNS

For sale at Farmers' prices 1 2-year-old Red Bull, 1 yearling Red Bull, 1 yearling Roan Bull. C. A. SAUNDERS, Meadow Brook Stock Farm, Culpeper, Va.

Practical Usefulness. Individual Excellence.

"Double Standard Polled Durham"

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TIPPECANOE, 28TH, 14034-143834, at head of herd.

SCOTCH and BATES BREEDING—MILK and BEEF combined. Both sex from Prize winners FOR SALE. Address F. S. BUNKER, R. No. 1, Delton, Sauk Co., Wis.



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Aberdeen Angus.

Choice males suitable for heads of most select herds. Send for printed description.

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MILTON, IND.

Rose Dale Herd

Aberdeen Angus.

Top notch young registered Bulls our specialty. A few heifers to offer with bull not skin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS, Jefferson, Va.

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ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

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LARGE HERD OF FASHIONABLY BRED REGISTERED ANIMALS, INCLUDING COWS IN THE ADVANCED REGISTRY. HERD HEADED BY THE BRILLIANTLY BRED IMPORTED BULL,

TOP NOTCH No. 9023.

The Dam of this Bull, Imported ITCHEN BEDA, took 1st prize at the "Park Royal" Show in England in 1902, and her daughter ITCHEN BEDA II, took the same honors in 1904: further, Imported TOP NOTCH'S Dam, ITCHEN BEDA, entered the official advanced Registry of the American Guernsey Cattle Club this year with a record FOR THE YEAR of 10642.10 lbs. of milk; 548.70 lbs. of butter fat, equivalent to 640.15 lbs. of butter.

The Pedigree of Imported TOP NOTCH, with some of the achievements and prizes won in the direct line of his ancestry, are given below:

TOP NOTCH, 9023, bred by Sir Henry Tichborne, of England, was sired by Rival, 1343 E, and is out of Imp. Itchen Beda, 15627. His father, Rival, by Rival of Mont March, 1164, P. S., out of Clatford Gentle, 4746, E. (first prize English Royal, B. & W. E. and Royal C., 1900). His mother, Itchen Beda, 15627 (see record above); she by Loyal of Huguets, 973, P. S. (first prize, 1896, second prize, 1898); sire of Itchen Lady, Hayes Lily du Preel. His extended pedigree is impossible in this space, but will be furnished if desired. It goes back to winners of the Queen's prizes, as well as to members of her late Majesty's Prize Herd.

MORVEN PARK is situated in Loudoun County, Virginia, and because of its climate and soil is peculiarly adapted to the production of the highest class of animal life, and particularly to supply the needs of Southern breeders of pedigreed cattle.

REGISTERED and TUBERCULIN TESTED animals for sale, including a fine lot of BULL CALVES at reasonable prices.

For further particulars, Address

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We are now booking orders for pigs May and June delivery, sired by my two great boars, LUSTRE'S CARLISLE OF BILTMORE, No. 72057, and MASTER LEE OF BILTMORE, No. 73379, and out of soweweighing from 500 to 600 pounds in only fair breeding condition.

Lustre's Carlisle, who will not be two years old until June, now weighs 620 pounds, and is as active as a six months old pig. He is sired by Royal Carlisle, No. 68313, dam Topper's Lustre, No. 54323. Master Lee is sired by Loyal Lee, 2d, of Biltmore, No. 56332, dam imported Dancesfield Mistress, No. 73377. Loyal Lee, 2d, is undoubtedly the champion Berkshire boar of the world, having more prizes to his credit than any other boar living or dead.

Dancesfield Mistress is a daughter of Dancesfield Huntress, No. 68173, who has an unbroken record of first prize at all the leading English shows with one exception, and then being defeated by her daughter, Dancesfield Mistress.

Besides being royally bred, we consider Master Lee the best individual boar of his age we have ever seen, and predict that his get will make their mark in the show rings in 1906.

To show our confidence in what we offer and insure satisfaction to our customers, WE WILL SHIP PIGS TO RESPONSIBLE PARTIES ON APPROVAL. Address

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Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$25. Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

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JERSEY BULL,

Biltmore's Midas, 60467,

for sale. This is a splendid individual, just in his prime, 4 years old, and is sold to prevent inbreeding. Sire, General Marigold, dam Matilda of Pittsford, by Duke of St. L., and out of a daughter of Midas of Oxford. It is doubtful if there is a cow alive with more Stoke Pogia and Marjoram blood. She is a great milker, and although now over eleven years old, has milked during the last four months 4948 pounds, testing 27.95 pounds butter. Price reasonable, or will exchange for bull of as good but different breeding. H. C. MARCHANT, Charlottesville, Va.

REGISTERED

JERSEY BULL,

"COLONEL," for sale. Three years old this Spring. He is a fine one. L. B. JOHNSON, R. F. D. 4, Charlottesville, Va.

THOROUGH-BRED....

Berkshire Boars, Dorset Buck Lambs, Jersey Bull Calves.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

Dr. Jos. Haas, of Indianapolis, Ind., has been manufacturing his famous Hog Remedy for almost thirty years, and has done thousands of dollars worth of good to swine-raisers in protecting them against a possible loss from disease and unthriftiness among their hogs when they feed this Remedy, in time and as directed. The following testimonials prove the merit of the goods: Mr. B. F. Tyler, of Logan county, Ill., writes under date of March 9, 1905,—"I am glad to inform you that I am now using your Hog Remedy and have never used any other kind. Am perfectly satisfied with its results and have no reason to try a substitute."

Mr. F. A. Rhodes, of Walworth county, Wis., under date of March 8, 1905, says,—"I always recommend your Hog Medicine wherever I have a chance. Some of my neighbors lost all of their hogs this winter, and others got scared and sold theirs; but I used your remedy, and I recently sold my hogs at a good profit. The Remedy more than pays for itself in the gain in weight. Believe me when I say that I would not keep a hog on my place if I could not get Dr. Haas' Hog Remedy to feed to them."

York county, S. C., Mar. 5, 1905. I find your journal one of the most interesting and valuable among several that I read. I wish it were issued oftener—semi-monthly, at least.

F. C. WHITENER.

Halifax county, Va., Mar. 7, 1905. I prize the Southern Planter highly.

H. K. CANTINE.

Elkton Stock Farm,

LOCATED ON NORFOLK & WESTERN R. R.

12 Miles W. of Lynchburg.

Breeders of Pure Bred, Registered

HEREFORD CATTLE

—AND—

BERKSHIRE HOGS.

Young stock for sale at all times, at reasonable prices.

All statements and representations guaranteed.

LONG DISTANCE TELEPHONE.

FOREST DEPOT, VIRGINIA.

DEVON HERD. HAMPSHIRE DOWN FLOCK
ESTABLISHED 1884. ESTABLISHED 1880.

DEVON CATTLE BULLS AND HEIFERS.

Hampshire Down Sheep, RAMS AND EWES.

ROBERT J. FARRER, Orange, Va.

Dorset Sheep.

WOODLAND FARM DORSETS

are better than ever before. We have rams of all ages, flock headers, for sale. Also some useful ones suitable for grade ewes. All recorded and of best breeding. J. E. WING & BROS., Mechanicsburg, Ohio.

HEREFORD CATTLE, DORSET SHEEP....

Will sell every hoof on my farm at a bargain to the right man. Write me at once. H. ARMSTRONG, Lantz Mills, Va.

Hammond's Slug Shot for Potato Bugs.

TO THE EDITOR OF AMERICAN GARDENING:

In your issue of June 18, on page 399, I notice a good article on the Colorado Beetle or Potato Bug. For the benefit of your numerous readers, I would advise them to try HAMMOND'S SLUG SHOT. I have used it here this season with excellent results, on Potatoes, Egg Plants, Cucumbers and Squash—for Potato Bugs, and also for Striped Beetles, and it is the best remedy I know of, simple and effective. I purchased two of the DUSTERS which he advertised in your paper, and they are very useful articles. The best time to dust the plants is early morning, as the substance adheres much better when the dew is on. A light dusting is sufficient, and woe betide the bugs or the larvae. Once they get a taste of it they shrivel up right away.

GEORGE STANDEN, Gardener to Col. D. S. Lamont, Milbrook, N. Y., 1904.

Send for Pamphlet on Bugs and Blights to BENJ. HAMMOND, Fishkill-on-Hudson, N. Y.



is on. A light dusting is sufficient, and woe betide the bugs or the larvae. Once they get a taste of it they shrivel up right away.

Sold by Seed Dealers and Merchants all over America.

BILTMORE FARMS

BILTMORE, N. C.

We increase our sales of breeding stock about 30% a year. How?

1. By confining our efforts to the most **USEFUL VARIETIES** of each breed.
2. By giving full value for money, and making quick sales on a small margin of profit, which the unusual size of our business **MAKES POSSIBLE**.
3. By realizing that our customers interests are also our own.
4. By our old customers coming back because they have found that they cannot get the same quality anywhere else.

BILTMORE JERSEYS

Five herds of Golden Lads and get of Trevarth. Distinguished for large persistent milk yields, richest breeding, tuberculin tested, and the best type. More choicely bred cows, with large monthly and yearly butter and milk tests than any other herds.

Nothing under \$100. but these are the cheapest in the end.

BILTMORE BERKSHIRES

Headquarters for either Homebred or Imported We have since 1898 brought out the best sows and boars that we could personally find in England and combine them with our home blood, and can, therefore, offer young boars and sows of the choicest type, quick maturing and growthy, from our absolutely healthy herds.

UTILITY BREEDS OF POULTRY

Barred and White Plymouth Rocks, Golden and White Wyandottes, S. C. White and Brown and R. C. White Leghorns, Pekin Ducks, Bronze Turkeys. Also Rough Coated Scotch Collies.

At the World's Fair, St Louis, our birds won **TWENTY-EIGHT** regular and special premiums, more than twice as many prizes on the varieties we exhibited, as all our Southern Competitors. Over 2,000 Premiums at other leading exhibitions and fairs.

Send for 1905 Circular of Prize Matings and prices of eggs from same.

WASHINGTON NOTES.

The losses in cattle and horses shipped from this country by steamer have decreased around a thousand per cent., or rather to one-tenth of former figures since the Bureau of Animal Industry has enforced its shipping regulations. Power was given the Secretary of Agriculture by Congress to make and enforce regulations as to space, ventilation, food and water supply, etc., in ocean shipments, giving him a very broad authority. The result is that we have the finest system of livestock shipments in the world and when cattle decks are ready for a load they are as attractive as the steerage quarters on some boats. An interesting interview in a New York paper from an official of one of the ocean transportation lines says that while years ago cattle shipments were practically in the hands of the steamship companies and the insurance companies, "now the United States government has taken a hand in the game and is running things with cheerful unconcern as to the feelings and profits of the transportation companies." In the old days there were no good freight boats. Even on the best steamers the sanitary conditions were lamentable, and cruel overcrowding was the rule. Mortality among the cattle was high and disease was prevalent. Now all that is changed. The government is looking out for the cattle and horses now, and it will not stand any trifling.

"The inspector comes along and goes through the boat. 'You will have to knock five more ventilators through that iron deck before you will be allowed to load,' he says cheerfully, and chalks the places for the ventilators. The owners swear, but that is all the good it does, and so on all through the stringent regulations."

ANIMAL QUARTERS INDIVIDUALLY INSPECTED.

The government officials regulate the amount of space allowed to each animal with pens built according to rule, with certain thickness of lumber, while the forks, pails, troughs and everything used in taking care of the animal must be thoroughly disinfected under government inspection after each voyage, the pens washed with carbolic acid and whitewashed and the horses' blankets and things of that sort fumigated.

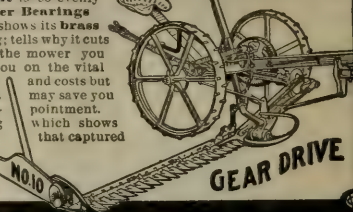
Secretary Wilson intends that American animals shall land in England in first-class condition, so far as the transportation part of it is concerned, and no country in the world provides for its cattle and horse shipping as well as we do now. Other countries have sent representatives here to study our shipping methods.

Instead of using old tubs and tramp steamers, requiring several weeks in passage, our fast freighters take only nine days. Most cattle and horses have good sea legs—they are fine balancers, but the freight ships are fitted out with bilge keels and every modern con-

JOHNSTON MOWER NO. 10

The buyer of farm implements wants the best his money can buy. He wants implements that require the least trouble to operate; least expense in repairs; easiest in draft; greatest in capacity; that do the work the best. In the **Mower** he gets just what he wants—nothing he don't want. Brains and long experience can produce or money can buy, you reasons why. We have only space here to hint at some free Mower booklet gives them all—shows the parts in detail the Johnston No. 10 is the cheapest mower to buy. It tells why prevent lost motion; why its **draft** is so evenly divided; shows its **Steel Roller Bearings** which make it lightest in draft; shows its **brass bushings** which prevent heating; tells why it cuts clean, runs quietly—why it is the mower you want. This booklet will post you on the vital mower points you ought to know and costs but may save you pointment. Will also send our 1905 catalog which shows the Johnston farm implements the highest award at St. Louis.

The Johnston Harvester Co.
Box C-11 Batavia, N. Y.



The Grove Stock Farm

Offers 6 PURE-BRED

DORSET EWES

(Three 2 years and three 1 year old)

Registered and transferred to the buyer for \$65.

N. & W. and Southern Railway.

T. O. SANDY, Burkeville, Va.

OAK HILL FARM

SADDLE and THOROUGHbred HORSES,
ABERDEEN-ANGUS and JERSEY CAT-
TLE, BERKSHIRE, POLAND-CHINA, DUCO
JERSEY and TAMWORTH HOGS. ❖ ❖

WHITE PLYMOUTH ROCKS, WHITE HOLLAND TURKEYS, PEKIN

DUCKS and PEA FOWLS. Eggs in Season.

SATISFACTION GUARANTEED. WRITE FOR PRICES.

Shipping Point, Oak Hill, (station on farm) D. & W. Railway 15 miles West of Danville, Va.

SAM'L HAIRSTON, Wenonah, Va.

Buy only the genuine
FARQUHAR Keystone
Corn Planter



DON'T BUY ANY OTHER

Until You Investigate the Merits of a Machine

That Has Passed the Test of Time. Plants corn, beans, peas, etc., without cracking a grain or missing a hull. Drops seed in drills, or in hills at any distance. Distributes any kind of fertilizer in any quantity desired, with absolute safety from injury to seed. Send for handsome new catalogue of Corn Planters, Grain Drills, Cultivators, Spring Tooth Harrows and other farm tools; also Reapers, Mowers, Saw Mills and Threshing Machinery. We manufacture the largest and most complete line of farm machinery and implements on the market. It will be to your advantage to write to us before buying anything in this line. Farquhar machinery awarded more Gold Medals at St. Louis than any other.

A. B. FARQUHAR CO., Ltd., York, Pa.

trivance to insure steadiness, safety and speed. They are even steadier than most of the big passenger boats.

PLANT LEGUMES AND INCREASE SOIL PRODUCTIVENESS.

An Agricultural Department publication—farmers' bulletin No. 16—entitled "Leguminous Plants for Green Manure and Feed," is a pamphlet which I have read through several times since its publication. The legumes form the back-bone of agriculture. Without them it would be impossible to supply the nitrogen necessary to plant growth. They include the entire family of clovers, alfalfa, beans, peas, soy beans, cowpeas, vetches, etc., and have the faculty of obtaining vast quantities of the free nitrogen of the air. Thousands if not millions, of tons of this elusive fertilizer are annually captured by the legumes from the air we breathe, and fixed in the soil for the benefit of succeeding crops. In this connection excellent work is being done by the Department of Agriculture in providing for the artificial inoculation of soil deficient in the minute bacteria necessary to enable the various legumes—each species of legume has its own particular parasite—to absorb the nitrogen in the air, and whenever desired, these bacteria, in concentrated tablet form, will be furnished by the Department to farmers. By the proper system of green manuring or plowing under legumes, the most barren soil can be cheaply brought into a state of good fertility through the ability of these plants to obtain from the air this most expensive form of fertilizer, for a field of cowpeas, for instance, will grow luxuriantly, if cheaply fertilized with potash and phosphorus alone, drawing all their nitrogen from the air.

GROWING FANCY HEAD LETTUCE.

A method of keeping lettuce crisp and attractive for a very considerable time after marketing and thereby securing a high price is described by the Department of Agriculture in connection with experiments undertaken by several experiment stations. The method is simply to continue the lettuce growing, or at least not deteriorating, by keeping it in pots or earth balls. In one instance noted the lettuce was transplanted when two inches high into two-inch pots. These were plunged ten inches apart into rich soil so that the pot rims were well covered with the soil. The potting soil was composed of equal parts of loam, manure and sand. The plants made a more compact growth and headed quicker, though they were somewhat smaller, when grown in pots than when grown in beds. The method of marketing was to remove the plant from the pot, wrapping the ball of earth in oiled paper. For close-by consumers the lettuce could be marketed in the pots and the pots returned. Many persons, especially in the larger cities, would be willing to pay a considerable increase in price for this unique method of ob-

Planet Jr. Tools

will save half your time, expense and fatigue. Write today for a free copy of the 1905 Planet Jr. Catalogue, which describes our entire line, including seeders; wheel hoes; hand, one and two-horse cultivators; harrows, etc.



No. 4 Combined Seeder



No. 8 Horse Hoe

No. 4 Combined Seeder
sows in hills or drills, cultivates, plows, marks and performs many other duties. Almost instantly adjusted. Easy to operate.

No. 12 Double Wheel Hoe
for weeding, furrowing, ridging, etc., between or astride rows, to or from plants.

No. 8 Horse Hoe
is the favorite walking horse-cultivator. Stiff steel frame; interchangeable, self-polishing hollow steel standards; reversible hoes; patent depth-regulators, etc. Opens from 9 to 25 inches.

No. 70 Pivot Wheel Cultivator
is the most widely chosen tool of its class. Cultivator and hoe attachments, easily and quickly adjusted. Unequaled for weeding, furrowing, ridging, etc., between or astride rows, to or from plants. Stiff steel frame; interchangeable, self-polishing hollow steel standards; reversible hoes; patent depth-regulators, etc. Opens from 9 to 25 inches. Instantly adjustable at every point; can't get out of order. Almost unlimited in its variety of duties. Makes field work a pleasure.

No. 50 Pivot Wheel Cultivator
is the most widely chosen tool of its class. Cultivator and hoe attachments, easily and quickly adjusted. Unequaled for weeding, furrowing, ridging, etc., between or astride rows, to or from plants. Stiff steel frame; interchangeable, self-polishing hollow steel standards; reversible hoes; patent depth-regulators, etc. Opens from 9 to 25 inches. Instantly adjustable at every point; can't get out of order. Almost unlimited in its variety of duties. Makes field work a pleasure.

Don't forget the Catalogue.
S. L. ALLEN & CO.,
Box 1107 X, Philadelphia, Pa.

My Established Reputation



As a direct importer and breeder of the choicest strains of BERKSHIRE PIGS having now extended into almost every nook and corner of the U. S. I am encouraged thereby to try to do some good for my countrymen in the chicken business, hence I have built houses and yards for three popular strains: PLYMOUTH ROCKS, S. C. B. LEGHORNS and the "BLACK DEVIL" strain of Pit Games. Beautiful Pekin Ducks adorn my premises. Cockerels and Ducks now ready for shipment. Orders booked for eggs.

THOS. S. WHITE, Fessifern Stock and Poultry Farm, Lexington, Va.

BERKSHIRE BOAR,

FIT TO HEAD ANY HERD,

FOR SALE.

Breeding Right.

Individuality O. K.

FOREST HOME FARM, Purcellville, Va.

The Improved Raney Canning Outfits.

LADIES, FARMERS,

ANY ONE wishing to do Canning for Home or Market

FRUIT GROWERS, TRUCK GROWERS

Write now for our new illustrated circulars, giving estimates of what can be done with the different fruits and vegetables, where and how to get cans, and cost of same, and much other valuable information. We make complete outfits for use on cook stoves, either wood, coal, oil, gas or gasoline, or simple furnace of brick or stone. Price from \$5 up. Get your Canner now and secure agency.

THE RANEY CANNER CO.,
Chapel Hill, North Carolina.

taining absolutely fresh lettuce and gathering it, as it were from their own gardens. A slight variation of this method is to grow the plants in flat boxes, or in a regular lettuce bed and lift the plants with a trowel, wrapping the moist ball of earth in old paper.

Minister Jackson, stationed in Athens, in a government report tells some interesting facts on Serbian agriculture, and described the State farms at Bobretchevo - Lubritchevo - Shabatz-Belakera, presided over by Minister of Agriculture Radovanovitch, "Servia," says Minister Jackson, "has always been famous for its pigs. They are ubiquitous, short in body and good feeders."

Consul Worman, Quebec, reports a process recently patented in Canada for the manufacture of milk powder. After rendering the albumen soluble by a slight chemical process the milk is evaporated and sugar is added in small proportion to insure preservation. The result is a product very greatly condensed and containing all the nutritious properties of milk. A small tablet which can be carried in the pocket is said to be the result from five gallons of milk.

Wheat exports in the month of February amounted to only \$103,000 against \$1,203,000 in February of last year, while flour was \$2,575,000 against \$5,611,000. This decrease is believed by the Bureau of Statistics to be due in part to the unusually large crops of wheat abroad, also to the fact that our crop of last year was considerably less than that of the preceding year.

The exports of cotton in February fell nearly eleven million dollars in value below those of February a year ago, due entirely to the fall in prices, since the February, 1905, exportations were considerably greater than those of 1904. The exports of wheat, flour and cotton for February were about fifteen million dollars below those of February, 1904.

The exports of bread stuffs for February were ten million dollars, against twelve million dollars for January and against eleven million dollars for February of last year. The exports for the first eight months of the fiscal year are, however, but sixty-three million dollars against 114 million dollars for the corresponding months of last year. The February exports of cattle and hogs were heavy, being \$3,857,000 against \$3,550,000 for February of 1903 and \$2,600,000 for February of 1903.

GUY E. MITCHELL

FOR 5 HP GAS ENGINES

Grinds Ear Corn and Shuck Corn.

Capacity 12 to 18 bushels per hour. Safety Quick Release. 50 other sizes and styles of

Scientific Grinding Mills.

Sweep-geared, Combined and Power. Most efficient and economical mills on the market. Simple, strong and durable. Write for new catalogue C-5.

THE FOOS MFG. CO., (Established 25 years) Springfield, Ohio.

Highest Award, Gold Medal, St. Louis, 1904.



SUNNY HOME FARM.

High Class Aberdeen Angus Cattle.

Those of our friends who want bulls from Sunny Home this spring should send orders AT ONCE, as we have only three first class animals left. Don't write for yearling bulls, as it is very seldom we have any as old as that for sale. Ours go as calves at business PRICES. We have transferred the past six weeks fourteen bulls, a number of pure bred heifers; also sold our entire crop of grade heifers (40 head) calves, and accepted an

order for our entire crop of grade calves for 1905. This will show what the people think of the Sunny Home products. Place your orders now for calves to be delivered next fall, and secure a discount of 5 per cent. Have one three years old, pure bred, Shropshire ram for sale cheap—a fine one. Write A. L. FRENCH, R. F. D. 2, Byrdville, Va. Farm at Fitzgerald, N. C. D. & W. R'y.



YOU WILL FIND IN THE DELAWARE HERD OF

ROYAL ANGUS CATTLE

a most SUPERB LOT OF INDIVIDUALS, both sexes, of GRAND BREEDING.

Our herd bull, PRINCE BARBARA 68,604, is a half brother to Prince Ito 2nd, grand champion at St. Louis. Females equally noted. Remember, we do not charge fancy prices. Drop a postal for pamphlet and list of bargains we are now offering. Satisfaction guaranteed, of course.

MYER & SON, Props., - Bridgeville, Del.

GLEN ALLEN STOCK FARM, Breeder of Aberdeen Angus Cattle.



"The Bulls that have made Glen Allen Famous."

Herd headed by ALLENHURST KING 4, No. 4119, son of McHenry Blackbird 20th, 32499, assisted by POLLY'S ITO, 78790, son of Prince Ito, 50005, the famous 9,100 bull.

Young Bulls for sale at reasonable prices, fit to head the best of herds, regardless of price or breeding.

W. P. ALLEN, Proprietor,
R. F. D. No. 1, Ewing, Va.

EDGEWOOD STOCK FARM.

✿ ✿ DORSETS. ✿ ✿

Our FALL LAMBS are here, friends, and they are crackerjacks. Our Imported Ewes started lambing October 15th. Better give us your orders now. Last year many of you were too late.

J. D. and H. B. ARBUCKLE, Maxwelton, Greenbrier, Co., W. Va.



WINDMILLS

THE
DIAMOND
The greatest
Lambing
Ewe Made
for durability
and hard
usage.

PUMPS

Water Pur-
fying Pumps
Iron Pumps
Wood Pumps
of every
Description.

TANKS

—STEEL STOCK TANKS—
of every description.
Great Saving in Freight.
This is our 61st year.

THE TEMPLE PUMP CO., Mfgs.
Meagher and Canal Streets, CHICAGO, ILL.

COLLEGE OF AGRICULTURE AND EXPERIMENT STATION,
Virginia Polytechnic Institute.

BEEF CATTLE,

**Shorthorn,
Hereford,
Angus,**

Dorset Sheep. ❀ ❀ ❀ ❀ ❀ ❀ **Berkshire Hogs.**

DAIRY CATTLE,

**Jersey,
Guernsey,
Holstein Friesian.**

Shorthorn and Hereford Bull Calves and Shorthorn Heifer, two mature Cows. A few Bull Calves of the dairy breeds, for sale. Prices reasonable.

Orders taken now for Dorset Lambs and Berkshire Pigs.

For further information address

JOHN R. FAIN, Agriculturist, Blacksburg, Va.

A RAINY DAY ON THE FARM.

A rainy day on the farm is regarded as one of dreariness by most of us, and often, though, without giving due thought or consideration to our expression, we wish such days would never come. But this feeling of dreariness comes with our thoughts, and it is within our power to make these days pleasant and agreeable; but to accomplish this we must train our æsthetic faculty. Of course, sunshine and shadow, in the right proportions to make an agreeable contrast will always give feelings of pleasure to the mind, while a dull, cloudy day, rendered more dismal by the falling rain, has a depressing effect. But these influences are only external, and there is an "inner consciousness" that, if rightly exercised, will tend to place us on an equilibrium between our inner and external relations.

It may be that the usually busy farmer sees in the multiplicity of chores awaiting their turn about the farm, things that demand immediate attention, which he cannot reasonably give, and therefore his proper balance is disturbed. But a little philosophic thought along this line ought to set at rest this disturbance. He should convince himself that it is not best to worry over such things, and that they are not actually as bad as they seem to be, after all; that the optics of his mental vision are distorted, and that the designs of Providence are more fraught with wisdom than are those of men.

Have you ever heard of the two girls who went out to pluck roses? One said there were thorns on the rose-bush, the other said there were roses on the thornbush. Study this; there is a lesson in it.

FRANK MONROE BEVERLY.
Osborn's Gap, Dickenson Co., Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

LARGE YORKSHIRES.

The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times.

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

Address BOWMONT FARMS, Salem, Va.

10 REGISTERED

JERSEY HEIFERS.

From \$20 to \$50 each.

GUERNSEY BULLS, 6 months old, \$30 to \$40.

BERKSHIRE HOGS, all ages, and Pigs not akin.

EGGS from Barred Plymouth Rocks, Brown Leghorns

and Pekin Ducks \$1 per sitting, carefully packed.

Also TOULOUSE GEESE. Eggs \$3 per dozen.

M. B. ROWE & CO., Fredericksburg, Va.



AN EXPENSIVE LUXURY.

What the Small Money Order Nuisance Costs the People.

The postal laws of the United States explicitly direct that the accounting officer shall correctly ascertain and annually report all the expenses of the money order service—that is to say, the total cost of issuing and redeeming postal money orders.

Unfortunately this mandate of law has never been complied with. One reason is that the clerical force of the Auditor's office has always been insufficient—another is that some of the items entering into the cost of money orders can only be approximately ascertained. It is possible, however, for those who know the inside workings of the Department to collate through official reports and reliable estimates all the money order expenses, and this has now for the first time been done under the auspices of the Sentry Box Bureau.

The following statement showing the cost of the money order system in the Post-Office Department, covering the real expenses of the issuing and redemption of the orders, is made from official reports so far as they go and from official conservative estimates of unreported expenditures:

Blanks and Stationery for the Money Order Service	\$ 170,000
Blanks and Stationery for the Auditor's Office	35,000
Salaries of Clerks in Money Order Division of the Post Office Department	75,000
Salaries of Money Order Divisions of the Auditor's Office	420,000
Salaries of Money Order Clerks in 1st and 2d class Post Offices	1,700,000
Commissions for issuing Money Orders to 3d and 4th class Postmasters	930,000
Loss of Money Order Funds from Fire, Burglaries, etc.	21,000
Services and Expenses of Post Office Inspectors engaged in Money Order cases	50,000
Expenses of United States Courts in trying Money Order cases	60,000
10 per cent. of Postmasters' Salaries at Money Order Offices	200,000
Total	\$5,491,000

The only item here included which can cause controversy is the last, relating to postmasters' salaries. There are about 35,000 postmasters at whose offices money orders are issued. A considerable proportion of their labor and a still greater proportion of their pecuniary responsibility is caused by the money order service, and handling the funds pertaining thereto. If there were no money orders these postmasters' salaries could be very properly

INGLESIDE HEREFORDS

Nearly 200 head registered cattle in herd. Herd headed by the noted sire, ACTOR 3D, 55052, assisted by Actor 26th, 136283; Marmaduke 5th, 126033, and Mapleton, 152322, all of which won prizes at the St. Louis World Fair, including the Junior Championship, besides many other prizes at a number of Eastern and Western Fairs, including the International at Chicago.

They grow large, mature early, and the greatest grazers of any of the beef breeds, and for the economy of production of high class beef have no equal. A choice lot of bulls, cows and heifers for sale. Also in number of Polled Hereford bulls recorded in the National Polled Hereford records. Write for catalogue and prices, or what is better, come and see the herd. Farm near Alderson, W. Va., on C & O R. R. Four trains each way daily. Address S. W. ANDERSON, Blaker Mills, Greenbrier Co., W. Va., Telephone and Telephone Station, Alderson, W. Va.



ACTOR 26TH, 136283.

Bacon Hall Farm.
Hereford Cattle -:- Berkshire Hogs
 REGISTERED—ALL AGES.
DORSET RAMS.
Toulouse Geese, Muscovy Ducks.

MOTTO: Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.



Grand Champion Prince Rupert, No. 79539.

Registered Hereford Cattle and Berkshire Hogs.

EDWARD GAY BUTLER, Annefield Farm, Berryville, Va.

Hereford Herd headed by Prince Rupert, No. 79539, whose son, Prince Rupert, 8th, won first prize in the 2-year-old class at the recent Chicago International show.

Berkshire Herd headed by Baron Premier, No. 55227, whose son "Admiral Schley" won first in the 6 to 12 months class at the International Show, 1902.

Young stock both calves and pigs for sale at reasonable prices.

CORRESPONDENCE INVITED.

ROSEMONT FARM HEREFORDS

The home of the great ACROBAT, who cost \$2,500, and an unequalled collection of fancy-bred Cows. Write for catalogue. Hereford History, and picture of Acrobat. Prices conservative.

Direct Duston White stay white! Wyandottes.

EGGS AFTER APRIL 1st.

Exhibition Mating, \$2 per lb; Utility Mating, \$1.50 per sitting; Incubator Eggs, from Utility Mating, \$1 per sitting; \$5 per 100.

ROSEMONT FARM - Berkshires - Hackney Horses - Berryville, Clarke Co., Va.



ACROBAT 50460.

CHARTERED 1870.

Merchants National Bank,

OF RICHMOND, VIRGINIA.

Capital,	- - - - -	\$200,000.00.
Surplus,	- - - - -	\$500,000.00.
Undivided Profits,	- - - - -	\$217,000.00.

Depository of the United States, State of Virginia, City of Richmond.

Being the largest depository for banks between Baltimore and New Orleans, we offer superior facilities for direct and quick collections. Accounts solicited.

JOHN P. BRANCH, Pres. JOHN K. BRANCH, Vice-Pres. JOHN F. GLENN, Cashier.
 Assistant Cashiers: J. R. PERDUE, THOS. B. MCADAMS, GEO. H. KEMMER.

Three Per Cent. Interest Allowed in Savings Department.

HEREFORD CATTLE

"Brains and Blood make Breed and Beef"

The Great Beef Breed of America.

— My Sale List Includes —

**AGED BULLS, YEARLING BULLS, BULL
CALVES, and COWS WITH CALF at Foot.**

PRICES LOW. QUALITY HIGH.

All Stock Registered.

MURRAY BOOCOCK,

KESWICK, = = = = = = VIRGINIA.

[Keswick is on the C. & O. Ry. East of Charlottesville, Va.]

EGGS FOR HATCHING.

The Imperial Fruit and Poultry Farm.

We are offering Eggs from high class pens at very low prices.
Let us book your order for any of the following:

***S. C. White and Brown Leghorns,
White and Barred Plymouth Rocks,
White or Laced Wyandottes.***

R. R. HEYDENREICH, Mgr., Staunton, Va.

reduced. Many believe that one-fourth of their salaries should be charged to the money order system, but to be absolutely safe and fair within due bounds this estimate only charges ten per cent. of their aggregate compensation to this service.

Now, as the official report for 1904 shows a total of fees received for the issue of money orders amounting to a trifle over \$3,000,000 it is clearly seen that the loss to the government on the whole service is approximately \$2,500,000.

The fees received by the government for the issue of money orders range in amount from three cents for orders of the lowest denomination to 30 cents for those of the highest. Official examination shows that 78 per cent. of the orders are of the denomination of \$5 or less, and 50 per cent. of \$2.50 and less. From this statement it becomes possible to ascertain the loss to the postal revenues incurred on the small money orders, which would come into direct competition with the proposed Post Check System.

About fifty millions of money orders were issued during the fiscal year 1904.

On 50 per cent. of these, or twenty-five million, a fee of 3 cents each was received; total..... 750,000

On 14,000,000, between \$2.50 and \$5, a fee of 5 cents each; aggregate..... 700,000

Thus a total of fees received from the 39,000,000 small orders was..... 1,450,000

Taking the above total cost of the money order system..... \$5,491,000

We have 78 per cent. (being cost of small money orders)..... 4,283,000

Less fees collected as above.. 1,450,000

Loss on Small money orders \$2,833,000

From these statements it will readily appear that if there were no money orders issued for less than 5¢ each, the system would pay a small but satisfactory profit. The average fee received on 11,000,000 money orders above \$5 each is 14.5 cents, while the average cost of the money order service for each of the 50,000,000 orders issued is a little over 10 cents. In other words, eliminate the small orders by substituting the post check, and the money order service of the Post-Office Department, instead of causing a loss of \$2,800,000 a year will show a profit of over \$300,000.

Figures like these are of value to our statesmen, who are anxious to discover the remedy for the great deficit in the national revenues, especially in those of the Post-Office Department.

The figures are also of interest to the people at large, who are clamoring for a cheaper, simpler and more convenient means of making small remittances by mail, such as would be afforded by the Post Check plan.—The Sentry.

Baron Premier 3rd 75021,



the head of our herd, was first in his class at World's Fair; weighs 900 pounds at 22 months. His dam is litter-mate to Lord Premier, 50001, selling recently for \$1,500; his sire was premier champion winner at World's Fair at St. Louis. With this great hog and a large line of both Imported and American well selected sows and gilts, especially chosen to mate with him, we are actually producing and accomplishing the pleasure of breeding the most magnificent strains of BIG, LONG, WIDE, DEEP, THICK-SET BERKSHIRE HOGS on short legs.

We are now offering a few bred sows and gilts and some three months pigs. It makes no difference how fine hogs you desire to purchase, you

need not go farther than

MAPLE SHADE FARM,

W. H. COFFMAN, Propr. Bluefield, W. Va.

THE - OAKS - STOCK - FARM.

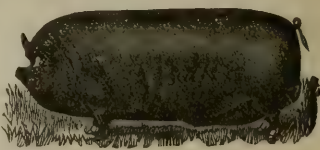
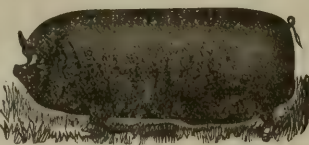
A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

We breed and ship the FINEST STRAINS of

Large ENGLISH BERKSHIRES

for less money than any firm in the South, quality considered. Every pig shipped possesses individual merit. Pedigree furnished with all stock. 200 Gallons Cider Vinegar.

ALEX. HARMAN, Mgr., Lexington, Va.



We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.

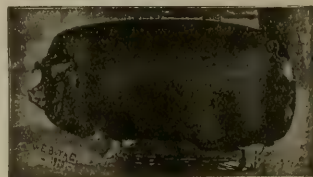
LARGE POLAND CHINAS.

PIGS, BOARS and BRED SOWS for sale.

In establishing this herd, it has been my aim to select animals of great size and fine breeding, with an abundance of prolificness.

My foundation stock is mainly from the best herds of Ohio, Missouri and Kansas, and are closely related to the most noted Poland Chinas in the world. Write for prices, testimonials and references, which will convince you that I am selling the best Poland Chinas in Virginia at prices in reach of all. Satisfaction guaranteed or stock to be returned at my expense.

J. F. DURRETTE, Birdwood, Albemarle Co., Va.



REGISTERED

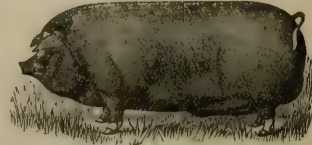
Poland = Chinas.

I have some choice pigs now ready for shipment. Can furnish either sex. Bred from the best strains and most popular families. THE KIND THAT GROW LARGE. Stock guaranteed as represented. Prices low, write for particulars. W. M. JONES, Crofton, Va.

REGISTERED

POLAND CHINAS

It pays to breed the best. Bred for size, prolificacy and fine individuality, most fashionable strains and have strong, official backing on both sides. Choice pigs, 10 weeks to 7 months old, set of Longfellow, No. 63065, for immediate delivery. Let us give you prices. T. M. BYRD, Route No. 3, Salisbury, N. C.



When corresponding with our advertisers always mention the SOUTHERN PLANTER.

It makes the most dollars for you, because it is the simplest in construction—has fewer parts—turns more easily—lasts longer—more easily cleaned—gives less trouble.

IT
MAKES
THE MOST
DOLLARS
FOR
YOU

EMPIRE CREAM SEPARATOR

If you are interested in making the most dollars, write for our proofs.
Empire Cream Separator Company, Bloomfield, N. J. Implement Company, Sales Agent, Richmond, Va.



FERTILIZER CHEMICALS FOR FARMERS.

As a general rule, chemicals are higher this season than one year ago. The prices quoted below are those at which goods could be purchased March 7, 1905, in lots of one ton and over in original packages f. o. b. cars delivered New York city for cash. It should be understood that in all cases carload lots of any one of the materials can be purchased for less money. It is to the interest of farmers, therefore, that they combine and order as much as possible in carload lots.

The following prices prevail on the date given above: Nitrate of soda, packed in bags, weighing about 210 pounds each and containing 15 to 16% nitrogen, \$47; dried blood, packed in bags, weighing about 200 pounds and analyzing about 10% nitrogen, \$44. This is an increase of \$4 per ton over the rate ruling January 1, 1904. Tankage containing about 7 to 8% nitrogen and 20 to 25% phosphoric acid, \$35, or an increase of \$5 over last year; sulphate of ammonia containing about 20% nitrogen, \$67, or an increase of \$2; nitrate of potash containing both potash and nitrogen in a highly concentrated form analyzing 45 to 46% actual potash and 13 to 14% nitrogen, \$75, or an increase of \$5; muriate of potash containing about 50% actual potash, packed in 224-pound bags, \$41.50, the same as last year.

Sulphate of potash containing 48 to 49% actual potash, packed in 224-pound bags, \$45.50. This is 50 cents less than the rulings a year ago. Kainit, containing 11 to 12% actual potash, \$12, the same as last season. Two grades of Peruvian guano are quoted as follows: One containing 3.25% ammonia, 18.5% phosphoric acid and 3.5% potash in 200-pound bags, \$30. The second grade containing 8.30% ammonia and 9 to 10% phosphoric acid and 2.50% potash, \$37. Acid phosphate, containing 14% available phosphoric acid, packed in 200-pound bags, \$10, or \$2 less than last season. Bone meal containing about 3 to 4% ammonia and 50% bone phosphate of lime, \$20, or \$5 less than one year ago.

Granville county, N. C., Mar. 6, 1905.

I enjoy the Southern Planter and could not get on without it.

GEO. W. MARROW.

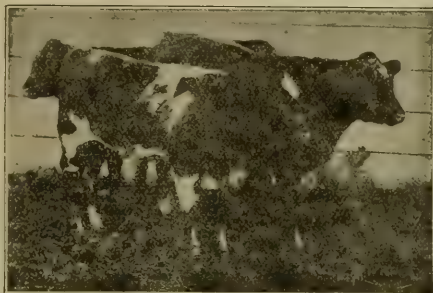
Cumberland Co., Me., March 14, 1905.

"You are on the right track, and a man who cannot get his money's worth out of your journal is a very poor farmer."

A. C. FERNALD.

JNO. S. FUNK, Glen Farm.

Importer and Breeder of Registered



Polled Durham Cattle.

PURE BRED
SOUTH DOWNS.

REGISTERED
POLAND-CHINAS.

Recently got a carload of Polled Durhams from the West.

I have added a very fine herd of Reg. POLLED ANGUS CATTLE to the Glen Farm. Chief sire weighs 2,100 lbs. This herd cannot be surpassed anywhere. Address JNO. S. FUNK, R. F. D. 7, Harrisonburg, Rock Co., Va.

Grazing for 100 Cattle.

Rate \$3.00 per head for the whole Summer until November 1st.

Special Rates for Herds of Twenty and over. ❖ ❖ ❖ ❖

Also Pasturage for a few Horses at \$1.00 per Month.

Applications should be made early. Address

BULLFIELD FARMS, Doswell, Va.

POLAND CHINA

AND

Tamworth Pigs

entitled to registration; also bred sows at reasonable prices.

APPLY TO J. C. GRAVES, Barboursville, Orange Co., Va.

URY STOCK FARM OF— HOLSTEIN - FRIESIANS

Have reduced our herd 25 head during the past two months, but would like to sell as many more before going into winter quarters. Herd headed by Dekol 2d, Butter Boy 3d, No. 2, which we can justly claim the best butter backed bull South of the Mason and Dixon line. Also a choice lot of English Berkshire sows from 3 to 9 mos. Sired by Manor Faithful, Fancy Duke and Esau Princess of Pilston. Before buying write or come and see us. THOS. FASSITT & SONS, Sylmar, Md.

ANGORA GOATS.

We have just imported over 300 fine Angoras from New Mexico. We have Angoras from Oregon, Texas, California and New Mexico.

DIAMOND V RANCH, - - - - - Rock Castle, Va.

GOSSIP OF WASHINGTON.

The proposal being made to secure the reduction of the duty on Philippine sugar and tobacco promises to bring on another fight similar to the sugar war over Cuban reciprocity. It is proposed now to lower the tariff on sugar and tobacco coming from the Philippines twenty-five per cent., although it is understood that Secretary Taft proposes to continue a fight from session to session of Congress until free Philippine sugar and tobacco are secured. In this connection it is interesting to know the great and varied development which is going on in beet sugar affairs. In fact, a strong argument which the beet sugar people advance why Philippine sugar production should not be unduly stimulated is that if the beet sugar industry is given a reasonable period, of say ten years, the industry will be upon such a basis where it can stand alone. No less an authority than Secretary Wilson himself is credited with this belief and the statement that it will be possible to produce beet sugar in this country at two cents a pound.

AMERICAN BRAINS REVOLUTIONIZING THE BEET.

There are a number of experiments in progress which point strongly to this result. For instance, two seasons ago the Department took up the suggestion of Mr. T. G. Palmer and started in to breed up a single germ beet seed. The great obstacle to American beet growing is thinning the young beets, a job which must be done entirely by hand—with the thumb and finger. The beet seed is provided with four or five germs, each one producing a sprout. All but one of these must be removed, and at the best a setback is given to the young plant by the disturbance. But unless the operation is performed at just the right time the damage is great, and if neglected for ten days or two weeks results in a loss of from twenty-five to thirty-five per cent. in the yield. In every cupful of beet seeds there may be two or three balls containing but a single germ each. Under the direction of Secretary Wilson and Professor Galloway, several bushels of beet seeds were critically examined and finally 2,500 seeds selected containing single germs, which were planted in the Department's green-houses. They grew vigorously and last spring the beets were shipped to Utah and planted under government supervision. The result has astonished the Secretary. Some thirty per cent. in this first trial came true—i. e., produced single germs. The expectation is that within three or four generations the Department will secure a pure strain of single germ beet seeds. This means that beet thinning can be done with a hoe, without back bending, and that where a man can now take care of perhaps five acres of beets, and even then secure a decreased yield on part of the acreage,

RUBEROID

(TRADE MARK REGISTERED)

ROOFING



STANDARD FOR 14 YEARS.

The oldest prepared roofing on the market, and the first Ruberoid Roofs laid, many years ago, are still giving satisfactory service under the severest climatic and atmospheric conditions

Contains no tar or paper; will not melt, rot or tear. Acid fumes will not injure it. Outlasts metal or shingles. Any handy man can apply it.

There is only one Ruberoid Roofing, and we sell it. You can verify its genuineness by the name on the label and on the under side of every length of Ruberoid Roofing. Send for samples and booklet.

A large stock of Corrugated and V Crimp Roofing always on hand.

Southern Railway Supply Co.,
1323 East Main Street,
RICHMOND, VA.

\$100.00 in Prizes To Corn Growers.

We wish to introduce to the Southern Planter readers, the remarkable fruitful

Battle's Prolific Corn

which has made such magnificent yields, wherever used.

We offer cash prizes, of \$50, \$25, \$15 and \$10 respectively, for the best corn grown from this seed. Each planter entering the contest is to send us 50 ears, not later than November 15th. The judges will then decide among what four farmers the \$100 will be divided, in the above amounts.

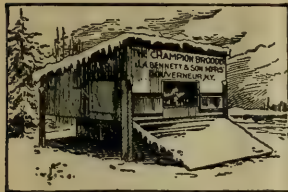
The judges are; Dr. C. W. Burkett, West Raleigh, N. C.; Mr. T. B. Parker, S. B. A., Raleigh, N. C. and Col. J. S. Carr, Durham, N. C.

Even if there were no prizes offered, your increased yield of excellent corn would fully repay you.

Small packages of this seed 10 cents; large packages containing one pint, 25 cents. 10 cents may be the means of you winning \$50.

Write for prices on larger quantities.

SOUTHERN SEED CO., F. G. Battle, Mgr., Durham, N. C.



60,000 poultrymen, women and farmers are making money raising chicks with our machines for the early market. Early chicks bring the big prices. Our big book tells how to breed, feed, hatch and grow chicks for profit. It illustrates great poultry farms where Champion Incubators and Brooders are used. Big money from small investment. We are the largest brooder manufacturers in the world. 100 chick brooder only \$6.50, 120 egg incubator, \$16.50. Book is free.

J. A. BENNETT & SONS CO.,

405-411 Main Street,
GOVERNMENT, N. Y.



he can handle twenty or twenty-five acres, while he will save at least \$6 an acre over the present expense. With such seed machine planting would be practicable and the question of securing unprocured hand labor would be eliminated and the beet would be grown by American labor-saving devices which would put it in the front rank as an American crop. The most important feature of this discovery lies in the belief that the yield per acre will likely be doubled.

INCREASING THE SUGAR CONTENT.

Another promising feature of beet work lies in the breeding up of American seed which will produce beets enormously rich in sugar. Europe is satisfied with twelve and fourteen per cent. sugar. America is already producing eighteen, twenty and even twenty-three per cent. of sugar, but the beet investigators are confident that while twenty-three per cent. is now the maximum, it can eventually be made the average and that by selection and cross breeding even thirty per cent. is possible. The breeding up of other crops, wheat for instance, would warrant this belief. The new Assistant Secretary of Agriculture, Professor Hays of Minnesota, in his experiments has bred up a strain of wheat seed with an average increased yield of twenty per cent. Applied to the country generally, this would give us an additional one hundred million bushels of wheat annually. And Professor Hays is confident of being able to double that increase.

IMPROVEMENTS IN BEET SUGAR MANUFACTURING.

Another feature of the beet sugar industry which promises well lies in the possible manufacture of raw beet sugar. The present beet sugar factory costs at least half a million dollars. This great investment is idle the greater part of the year, except during the beet season, and necessarily requires the shipment of beets from long distance—the larger the factory the greater the distance. It is believed that sub-factories, costing only thirty or forty thousand dollars apiece can do the first part of the work, slicing, boiling, etc., and produce crude sugar, each small factory operating only during the beet season and then shipping its sugar to the big factory, where after that factory has finished with its own beets it can refine the product of the smaller factories and thus be

HOME OF THE SURE HATCH

**Clay Center's Claim to
Fame Rests on the
"SURE HATCH"
Incubators and
Brooders**

**60,000 IN USE AND SALES
INCREASING ENORMOUSLY**

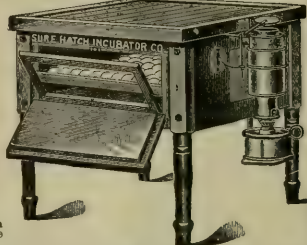
When you send to Clay Center, Neb. for an incubator or brooder, be sure and specify the "Sure Hatch" and get the best.

The "Sure Hatch" is the incubator that gave to Clay Center its claim to fame. It has passed through the stages of experimentation and is today a pronounced success. Why pay your good hard money for an untried incubator and waste time with an imperfect experiment, when you can get a "Sure Hatch" for the same price, that will not disappoint you? The "Sure Hatch" experience is paid for. You don't have to help pay for experimenting with uncertainties when you get a "Sure Hatch." It hatches more chicks to the 100 eggs that will live and grow than any other incubator made.

Sixty thousand machines in successful operation in all parts of the world attest their superiority and make it certain that you take no chances when you invest in a "Sure Hatch."

We take chances on the success of every "Sure Hatch" that goes out. How? By giving the purchaser a 60 days' free trial, during which he can take off two hatches to thoroughly test the machine.

Sure Hatch Incubator Co., Box 85 Clay Center, Neb. Box 1085, Indianapolis, Ind.



And just remember that the "Sure Hatch" Guarantees protection for you for five years. It is worth something to know and to feel that money cannot buy more in the incubator line than what is furnished for the price in the "Sure Hatch." All we ask for our 125-Egg Machine, with freight charges prepaid to your station is \$10.00. We can ship promptly.

Among the strong points of the "Sure Hatch" are: Its heater—live, hot air all around it; cold air can't get to it; saves oil and trouble; other incubators have coolers and waste oil. Built of California redwood, that will not warp, crack, shrink or swell; patented copper heating system and tested patent regulator; full asbestos lined.

A good incubator is a money-maker from the word "go." Place your order for one now. There is but one "Sure Hatch." It is made at Clay Center, Neb. Our eastern office is at Indianapolis. Free Catalogue and Poultry Book now ready. Send at once. Address the nearest office.

OUR STANDARD INCUBATORS

Sold direct to purchasers at lowest prices. **NO AGENTS.** Latest double-wall 250-Egg Nursery Incubator and Brooder. Everything complete, with Directions and Plans for \$24.00 cash. Satisfaction guaranteed. Reference, Delaware City National Bank. Set of Poultry House and Brooder Plans, 10c. Large 150-page Poultry book, 50c. Prompt shipment of anything ordered.

COLUMBIA INCUBATOR CO., Delaware City, Del.



GIBSON'S LIQUID LICE KILLER

Painted on the roosts and drop boards of your poultry houses will thoroughly rid your fowls and buildings of lice and mites. Also KILLS LICE ON CATTLE, HOGS AND HORSES. EASILY APPLIED, AND SURE DEATH TO ALL LICE. Try it at our expense. We will refund your money if it don't kill the lice. One-half gallon can, 80c; 1 gallon can, \$1.00.

Gibson's "Insect Powder" is the best louse powder on the market. A trial box will convince you. 10c. at your dealer's, or 15c. postpaid. 100 ounces by express, \$1. Agents wanted.

GIBSON & LAMB, Box 128, W. Alexander, Pa.

New Steel Roofing and Siding \$2.00 per 100 Sq. Ft.



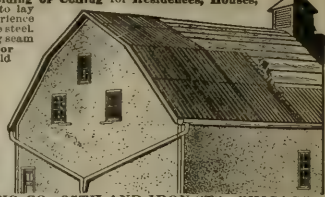
Painted red on both sides. Most durable and economical covering for Roofs, Siding or Ceiling for Residences, Houses, Barns, Sheds, Elevators, Stores, Churches, Poultry Houses, Cribbs, etc. Easier to lay and will last longer than any other covering. Cheaper than shingles or slate. No experience necessary. A hammer or hatchet the only tools needed. It is semi-hardened high grade steel. \$2.00 is our price for the flat. Corrugated as shown in cut, or "V" crimped or standing seam costs \$2.00 per 100 square feet. We offer Pressed Brick Siding and Beaded Ceiling or Siding at \$2.25 per 100 square feet. Thousands of buildings throughout the world are covered with this steel roofing and siding, making their buildings

FIRE, WATER AND LIGHTNING PROOF.

Send in your order for as many squares as you may need to cover your new or old building. Time will prove its enduring qualities. Withstands the elements, best of all roofings. At prices noted in this advertisement.

WE PAY THE FREIGHT

to all points East of Colorado, except Indian Territory, Oklahoma and Texas. Write for prices or shipment to such points. Ask for further particulars. Immediate shipment if you mail us your order at once. Satisfaction guaranteed or money refunded. Our Special Catalogue No. K-100 tells all about this roofing. It also quotes low prices on Building Material, Wire, Pipe, Plumbing, Bath, Doors, Furniture, Household Goods, Down Spouting, Sawn Lumber and thousands of other items bought by us at Sheriff's and Receivers' Sales.



CHICAGO HOUSE WRECKING CO., 35TH AND IRON STS., CHICAGO.

kept busy throughout the year. This would prove a great stimulus to the industry, would scatter the beet producing area and greatly stimulate the stock feeding and dairy business incident to beet pulp production.

THE SUGAR BEET IS AN AMERICAN FARM CROP.

The success of these investigations would certainly constitute the beet an important farm crop, and one of much wider scope than it is at present. The present objection that beet growing with the attendant thinning and hand-weeding is not suited to American farmers would be overcome, the beet grower would be able to contract, just as he does at present, for a specific acreage, and he would know just what he was going to get. His own market would not be limited, nor would there be any limit to the market for the finished product. Our sugar consumption is constantly increasing and last year amounted to one hundred and forty million dollars.

EXAMPLE OF "FORESTRY" METHODS.

A practical and educational example of American forestry lumbering is being worked out by the Bureau of Forestry in the Chippewa Indian Reservation, Minnesota. It has been the general policy of the government to sell its timber lands at \$2.50 an acre. In these Indian lands, however, aggregating some 175,000 acres, the plan was adopted of selling the timber—not the land—to the highest bidder, the trees to be cut under the direction of the Government Forester, leaving at least five per cent. of the timber standing to insure reforestation. Some \$15 an acre is being realized for this timber, while the title to the land remains in the government, and under the lumbering regulations prescribed by the Bureau of Forestry the integrity of this land as a future timber producer is assured. This is assured by a common sense plan, and moreover nets the government some \$12 an acre more than on the old way.

If some such policy as this had been applied to the vast government timber lands of the middle northwest, which have been ruthlessly destroyed, and which might be applied to the still more timbered regions of the far northwest, where a million and a half

"Paints that Stay Painted."

PAINT is what you need. Do you know that
PAINT will preserve and improve your property?
PAINT will give your property a prosperous appearance.
PAINT will increase the value of your farm. We have
PAINT on hand for everything—
PAINT for roofs and barns. **LYTHITE COLD WATER**
PAINT Carriage and wagon **PAINT**. Our "Standard" house
PAINT is ready-mixed, and for the money no
PAINT can surpass it. Write us for
PAINT prices and color cards.

JOHN W. ATKINSON & CO.,
 Richmond, Va.



Turn Fruit into Gold

Orchards, sprayed three times a year with the

SPRAMOTOR

produce 80% more revenue than those alongside of them that have not been sprayed. The Spramotor is an Insurance Policy that meets its own payments. Absolutely prevents Insect and Fungi Pests.

The Canadian Government used two power Spramotors last year to demonstrate the benefits from Co-operative Spraying.

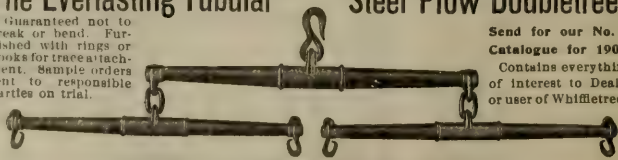
Write for booklet "A". It's free and gives full particulars about Fruit Spraying and its benefits.

SPRAMOTOR CO.

Agents wanted. Buffalo, N.Y., London, Canada.

The Everlasting Tubular

Guaranteed not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



PATTERN No. 105 EQUIPPED WITH FORGED TRIMMINGS.

Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

Pittsburg Tubular Steel Whiffletree Company,
 SOLE MANUFACTURERS

PITTSBURG, - - PENNSYLVANIA.

When corresponding with our advertisers always mention the
 SOUTHERN PLANTER.

Steel Plow Doubletrees

Send for our No. 8 Catalogue for 1904. Contains everything of interest to Dealer or user of Whiffletrees.

Harvester Talks to Farmers—No. 2.

The Steel and Iron Used in the Champion, Deering, McCormick, Milwaukee and Plano Harvesting Machines.

IN buying a harvesting machine—or anything else for that matter—the problem which confronts you is to secure the best machine for the money you pay—not only in convenience, but in durability, in strength, in long service and substantiality.

The problem confronting the manufacturer who wants a permanent trade is how to produce an article of the highest quality, and yet sell it at a reasonable price. He must keep his price down or his trade suffers; he must keep the quality up or his reputation suffers.

This is especially true in dealing with the American farmer, for he is the most discriminating buyer in the world. He will not pay an extravagant price for anything; he will not take a shoddy article a second time, at any price.

Separately, the manufacturers of the Champion, Deering, McCormick, Milwaukee and Plano machines could not afford to own the facilities for supplying the materials in a raw state for their product, for such facilities can only be operated economically on a large scale. The combined product of these plants, however, is sufficiently large to justify the ownership by the company of the sources of supply of raw material, and it was largely for the purpose of such ownership that the International Harvester Company was organized.

Take the matter of steel and iron as an illustration. The modern harvesting machine contains a good proportion of steel and iron, and in the past few years the price of these commodities has varied greatly. In times of commercial depression stocks of merchandise made of steel and iron in the hands of merchants throughout the country are allowed to run down to the lowest ebb possible, then when times improve these stocks must be replenished quickly. This sudden and enormous demand overtaxes the facilities, and because of premiums paid for quick delivery the prices of iron and steel go abnormally high. At times steel soared so high in price that numerous small establishments were forced out of business, and even manufacturers who had the spot cash to pay for the goods were often unable to obtain steel and iron at the times they most needed. Owning its own supplies of iron and steel in the raw state the Inter-

national Harvester Company is thus independent of such conditions, and cannot be forced to pay these exorbitant prices, but will have these supplies at the cost of producing them. This cost will not vary except to the slight extent that the cost of labor varies from year to year.

The coal mines owned and operated by the International Harvester Company consist of 21,532 acres in Harlan county, Kentucky, producing 15,000 tons of coking coal to the acre—a good 50 years' supply.

The iron mines operated by the Company are in the Hibbing district of the Mesabi range, in Itasca and St. Louis counties, Minnesota, and in the Central Falls district of the Menominee range in Sauk and Iron counties, Wisconsin. They produce high grade ore of both the Bessemer and non-Bessemer grade—a supply of 35,000,000 tons. The International Harvester Company's

every step in the production of the metal parts of the International machines is under the constant and careful supervision of those who are most interested in maintaining the high quality of the company's product.

This plant and its success is a striking illustration of the old proverb, "If you want a thing well done, you must do it yourself." The factory superintendent at the Champion, the Deering, the McCormick, the Milwaukee or the Plano plant, knows for a certainty that every pound of steel and iron that goes into the machines he manufactures is right, absolutely right, of the highest grade and free from flaw or defect. He knows also that it is laid down in the factory under his care at as low a price as it is possible to produce good steel and iron, for the cost of its production has not been affected by the speculative fluctuations of the market, and every labor-saving, money-saving, quality-improving device known to the art of steel-making has been employed in its production. This is only one example of the manufacturing policy of the International Harvester Company. The constant aim is to improve the quality of its product in every possible way. Not only its steel, but its lumber and other materials are produced at first hand.

We contend that this policy means much to the farmer who uses harvesting machinery, for it makes possible, and largely in the way in which it is possible, the production of a machine of the highest quality at the lowest cost.

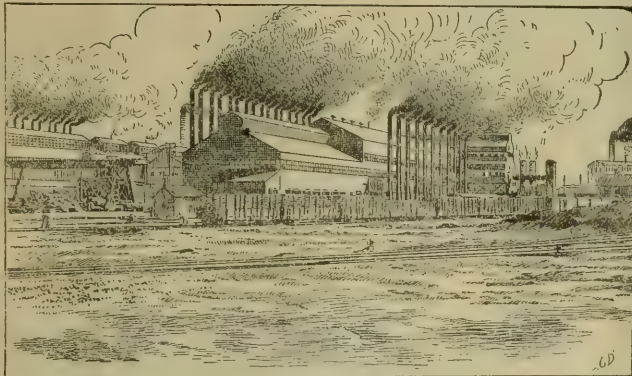
And that is what you are looking for.

You cannot afford to overlook this question of quality, durability, strength, long life. You can get this only in the International line, for the International Harvester Company is the only company having complete facilities for manufacturing under modern conditions.

The fact that the demands upon the manufacturing facilities of the International Harvester Company are increasing each year is pretty good evidence that the wide-awake, keen, discriminating farmer is satisfied with its product.

His endorsement is worth something to you. At any rate, we ask every reader of this little talk to do this:

Call on the dealer in your locality for catalogues and full information relative to the Champion, the Deering, the McCormick, the Milwaukee or the Plano in your own locality. Each dealer understands thoroughly the one line he sells, and carries a complete stock of repair parts. He'll be pleased to show you his particular line.



steel and merchant bar mills are in South Chicago, Ill. They cover an area of 50 acres, employ 1,500 men and have a capacity of 900 tons daily. The accompanying illustration gives a partial view of this big steel plant. It consists of two complete blast furnaces, a converting mill, a blooming mill and a merchant bar mill.

When the ore is received from the mine it is first smelted, then converted into steel, cast into steel ingots, reduced to steel billets, and rolled into various sizes of rods, flats and ovals required in making harvesting machinery.

This immense plant is admittedly one of the best equipped steel plants in the United States. It has every facility for producing steel and iron of the highest grade. It is manned by skilled and expert workmen, and

The International Harvesting Machines,

Champion, Deering, McCormick, Milwaukee and Plano,

are very satisfactory to the grain and grass-growing farmers of America. They are SATISFIED because they have received full value for every cent spent for their machines. Their endorsement is worth something to you. They have received greater value than they could get elsewhere, because of the superior facilities for manufacturing and the common-sense policy of the International Harvester Company.

Remember, The International Lines are Represented by Different Dealers. See them for catalogues.

Binders, Reapers, Headers, Header-Binders, Corn Binders, Corn Shocks, Corn Pickers, Huskers and Shredders, Mowers, Tedders, Hay Rakes, Sweep Rakes, Hay Stackers, Hay Balers, Knife Grinders, Gasoline Engines, Weber Wagons, Binder Twine.

acres annually is passing out of the hands of the government, it can be seen what a tremendous benefit would result not only to the Federal Treasury but to our future forest supply.

The agricultural appropriation bill has become another source of strenuous conflict between the House and Senate. When the bill was considered in the latter body a new item providing for a drawback on wheat was calmly tacked on to the bill, which was then, with other changes, sent back to the House, where it originated. The bristles actually arose on the backs of the leaders of that body at this manifestation of senatorial arrogance and upon a motion all but five members voted to throw out this Senate amendment. Democrats and Republicans vied with one another in urging the House to uphold its dignity and sustain its ancient prerogative of originating all appropriation and revenue measures. It is not a question as to the merits of the policy of establishing a drawback on wheat. It was a matter, as one Representative stated, as to whether the Senate should be allowed to continue the policy in appropriation bills, which under the Constitution must originate in the House, to cut out everything after the enacting clause and substitute a new measure. The fight over this question promises to be interesting, since the House seems to be in earnest, although it has before this wilted before the stern scowl of senatorial insistence.

Fear is expressed that the Senate will not pass the desired pure food legislation at this session. It is thought it will be just as well to let the subject go over for two or three or four or twenty years and allow for the printing of a few thousand more pages of discussion in the Congressional Record.

The House committee on Agriculture has favorably reported a bill—recommended by the Secretary of Agriculture—prohibiting the shipment from State to State of trees, plants, etc., carrying insect pests. There is no present provision, as the committee stated, for preventing the shipment and spread of fungus and other insect pests which are likely to result in irreparable damage to individuals and great loss to the entire country.

A joint resolution has passed the House providing for the publication of 3,000 additional copies of the Agricultural Department bulletin on Angora goats. GUY E. MITCHELL.

Saint Marys county, Md., Mar. 11, 1905.

I would not be without your paper for five times its cost and acknowledge myself in your debt for the valuable suggestions gleaned from it.

HENRY C. ADAMS.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

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Lots of Eggs

from my HEAVY LAYING STRAINS of

WHITE PLYMOUTH ROCKS

—AND—

Brown Leghorns.

Why don't you get a sitting?

Prices Reasonable, Quality Good.

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EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

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NO CHANCE FOR MISTAKE WHEN YOU BUY THIS RAKE

The cheapest farm implements are the kind that last. Durability in a rake is necessary, especially in the head, frame and wheels. This is where the wear comes and this is where

The JOHNSTON ALL STEEL RAKE

is particularly strong. There's no wood to shrink, split or get shaky—it's all steel except tongue or shafts. Head and frame are angle steel; wheels are steel with double cast hubs and round staggered spokes; teeth are long, flat-pointed and clean the ground without scratching. A well balanced rake that is a pleasure to operate. Our special rake folder tells why the Johnston costs less than the ordinary kind of rakes. It's free. Sent for our 1905 catalog and see the Johnston line of farm implements that won the St. Louis World's Fair Grand Prize—highest award given. A postal card will bring it.

THE JOHNSTON HARVESTER CO., Box C-11, Batavia, New York.



Buy the Success Manure Spreader



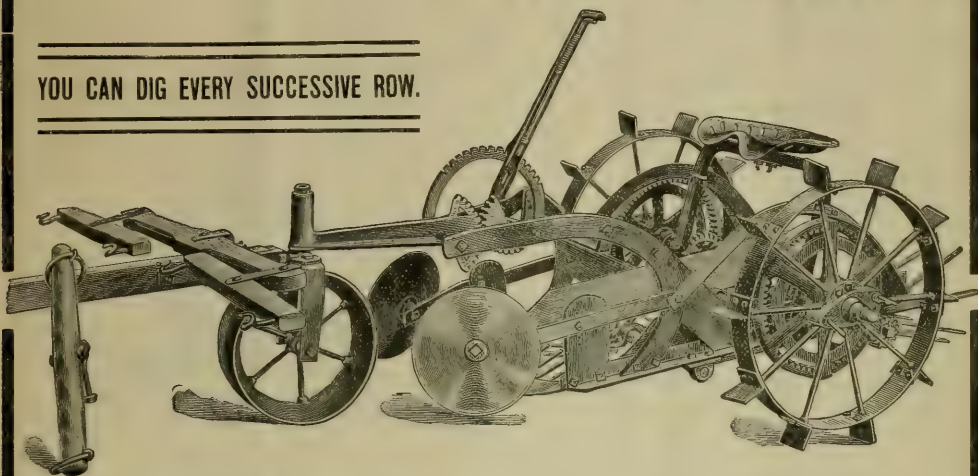
and avoid all mistakes. The first cost of such a machine is considerable and you owe it to yourself to get the right one in the start. We have been making Manure Spreaders for 25 years and know that the Success is right. Another proof is that there are more of our machines in use than of all other makes combined. Spreads any kind of manure, in any condition, lime, salt, ashes, plaster and fertilizer, broadcast or in drills. Simplest, strongest, lightest draft, easiest to load, and most durable. Full guarantee. Send for our book on Farm Fertility. It tells the complete story of the Success Manure Spreader. We mail it free.

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YOU CAN DIG EVERY SUCCESSIVE ROW.



ECONOMY in marketing your potato crop is assured by using our "O. K." ELEVATOR DIGGER. It is light in draft on team and pocket; and its simple construction, and strength of parts make it a reliable and valuable aid.

It is especially adapted for green work as the tubers are mainly raised to the surface the instant they leave the shovel, instead of passing over a grating with the weight of the soil pressing on them.

One team and person who can handle a sulky cultivator can easily operate it.

LET US KNOW HOW MANY POTATOES YOU GROW.

D. Y. HALLOCK & SONS,
York, Pennsylvania.

INSIST ON HAVING THE GENUINE YAGER'S SARSAPARILLA with CELERY.



BECAUSE
It cures Nervous Diseases and all ailments
and conditions induced by poor
and impure blood.



IT NEVER DISAPPOINTS THE USER.

It acts on the blood, nerves, kidneys, bowels and skin, and helps every organ of the body to greater efficiency. The general uses of this famous blood renewer and purifier are so well known we will not repeat them, but give herewith a list of the ailments wherein **Yager's Sarsaparilla** may be used with extreme advantage, and with the assurance of immediate relief and permanent cure.

Diseases of the Stomach, Liver, and Kidneys, Loss of Appetite, Sick Headache, Rheumatism, muscular or chronic, Dimness of Vision, Emaciation, General Debility, Female Weakness and all Blood and Skin Disorders.



Eruptions, Disorders, Facial Blemishes, Pimples, Tumors, Boils, Ringworms, Blotches, Scrofulous Afflictions, Cancerous Humors, Salt Rheum, Tetters, Catarrh, Syphilis, Mercurial and Malarial Poisoning, and other depraved conditions.

For all these diseases, **YAGER'S SARSAPARILLA WITH CELERY** will prove a quick relief and a certain cure. Simply follow the directions closely as given in the printed directions, and surprisingly gratifying results will follow.

YAGER'S SARSAPARILLA will cure these diseases, all of which have their origin in depraved or bad blood.

That most obstinate and dreaded of all diseases, Syphilitic Poison, is rapidly and radically removed from the system by the use of this invaluable alternative.

A FEW OF MANY INTERESTING LETTERS.

Smithfield, Fayette Co., Pa.

I have suffered greatly from kidney trouble. On getting up of mornings I could hardly straighten up for pain in my back, and my appetite was poor. I have taken one bottle of Yager's Sarsaparilla with celery, and it has done me so much good I am now on the second bottle, and feel better now than I ever did, and will be glad to write to any one who wants to know how this medicine acted with me.

Yours truly,

RICHARD GLIDDON.

Mt. Carmel, Pa., 318 Center St.

Yager's Sarsaparilla with celery is the best medicine we ever used in our family. My little boy had dropsy after a case of scarlet fever, and the doctors could not do him any good, so I got three bottles of Yager's Sarsaparilla and it cured him. I myself had kidney trouble, and two bottles cured me, and think it is the best medicine I ever used.

Yours truly,

MRS. A. TOLAN.

Gaylord, Va.

I have used Yager's Sarsaparilla with great success, for several years with rheumatism, and doctored with different medicines, which gave relief for a while, but it would come back. I commenced to take Yager's Sarsaparilla over a year ago. I took three bottles, and have not been troubled with rheumatism since. It is a splendid medicine, and has been a great benefit to me.

Yours truly,

H. T. CORNWELL.

It is of special and most wonderful service in the relief and cure of that large number of ailments, more or less painful and weakening, known as Female Diseases. Its influence is for good with almost the first dose.

Sold by all Druggists and Dealers
50c PER BOTTLE.



GILBERT BROS. & CO., Baltimore, Md., U. S. A.,
SOLE PROPRIETORS.

thus giving one-half his time, so employed, to the bad road cause.

It is estimated that the average farmer loses at least \$100 a year to the cause of bad roads. This injures not alone the farmer but the village storekeeper, because the farmer might earn one hundred dollars a year more and have that much more to spend.

If one were called upon to decide which of the great American industries had in the last forty years been most favorably affected by legislation, he would be obliged to say that farming was that industry. Much of this legislation has been only of indirect benefit, but it has all resulted in the farmer's favor, from the railroad subsidies, which open up vast territories for settlements, to the tariff schedules, which have amazingly developed our manufacturing interests, and made home markets for agricultural products. All this favorable legislation has been of benefit to the whole people as well as to the farmer. Now if by improving the common roads of the country, another direct and manifest benefit can be conferred upon the agricultural population, who is there so blind to the general welfare as to interpose an objection?

All the proposed measures provide for the issue of local bonds to raise funds to pay for the building of the roads. This naturally meets with favor from that class of capitalists who prefer to invest in local securities rather than railroad or manufacturing enterprises. Some objection is made to this feature, but it is properly regulated and restrained within reasonable bounds it cannot be objectionable. Good roads of a permanent nature, like all other enduring improvements, are made not only for the benefit of this, but of succeeding generations. It is, therefore, not unfair that some of the burden of paying for them be transmitted to posterity.

The movement has already been of vast benefit in an educational point of view. The Department of Agriculture has sent through the country expeditions, equipped with machinery and manned by expert road-builders, who have in many States demonstrated the ease and certainty with which valuable improvements in this line may be made. Innumerable official publications on the subject have also been widely distributed, and have stimulated discussion in the public press. All these things combine to bring about good results, and if the movement should go no further its benefits would be widespread and lasting.

But if a well-considered Federal enactment, giving substantial pecuniary encouragement from the national treasury, shall be put upon the statute books, it would be carrying out one of the earliest policies of the general government, and would, in the opinion of the SENTRY, be a long step in advance toward the goal of assured national prosperity.

THE SENTRY.

32 YEARS SELLING DIRECT

We are the largest manufacturers of vehicles and harness in the world selling to consumers exclusively.

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but ship anywhere for examination and approval, guaranteeing safe delivery. You are out nothing if not satisfied as to style, quality and price. We make 200 styles of vehicles and 65 styles of harness.



No. 649, Top Buggy. Price complete \$40. As good as sells for \$30 more.



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Our large Catalogue is FREE. Send for it. Elkhart Carriage & Harness Mfg. Co., Elkhart, Indiana.



The Model Vehicles are built on the One Quality Plan, by a factory making only one quality of buggies and that—the best.

One grade of materials, one class of Workmanship, and Price—that is the ONE QUALITY PLAN in a Nutshell.

You will find it an immense advantage to buy The Model Vehicles made on this plan and sold on One Month's Free Trial direct to the user. There is the quality consideration, the price advantage and the further safeguard of a two year guarantee.

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Coiled Spring Fence

STRONGEST AND BEST FENCE MADE.

It is made so good that all requirements of the farm are fully met. So closely woven the small pig cannot "wiggle" through. So strong the Bull cannot "baze" it. So heavily galvanized the elements cannot rust or corrode it. So durable that it is the last to yield to the ravages of Father Time. Sold on such liberal terms that a

THIRTY DAYS FREE TRIAL

Is given each customer that he may be sure he is satisfied and his money is returned to him if he is not.

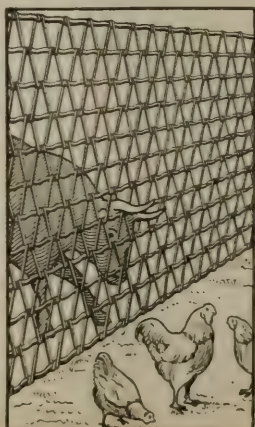
Buy Direct. It saves the profit of the middleman. Our Guarantee is all that any manufacturer can give, and infinitely more than the dealer can grant. When you deal with us you get your money back if you are not pleased, besides it insures a great saving because we sell to you at

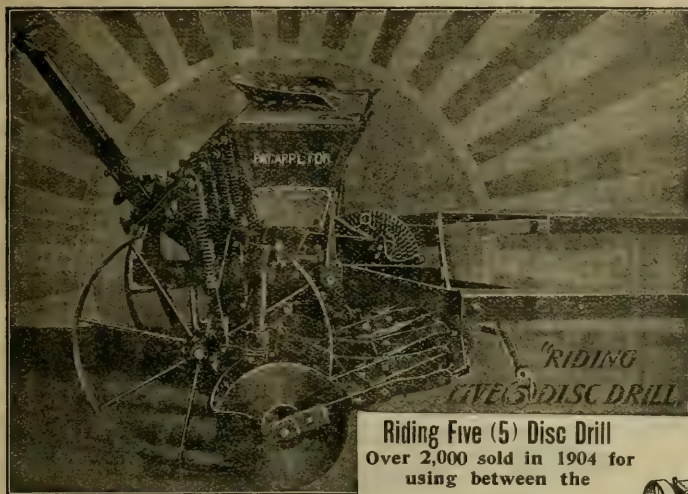
WHOLESALE PRICES AND PREPAY THE FREIGHT.

We use nothing but High Carbon Spring Steel Wire, and make it ourselves that we may be sure it is good. We coil it that it may provide for **Contraction and Expansion.** We heavily galvanize it with **Commercially Pure Spelter**, to avoid rust and corrosion in all climates.

Our long experience has made us masters of fence construction and we are able to tell you we make the **strongest and best fence** on the market. We have a 40-page Catalog which fully describes and illustrates every style of our **High Carbon Coiled Spring Farm Fence**, which you will gladly mail to you upon request. Write for it. Address,

COILED SPRING FENCE COMPANY
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Riding Five (5) Disc Drill
Over 2,000 sold in 1904 for
using between the
corn rows.

With Grass Seed Attachment. With 3-Row Garden Seed Attachment. With 2-Row Corn Drill Attachment.

For the Farmer, Truck Farmer and Gardener. Plain or Fertilizer.

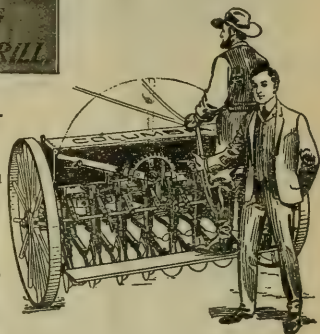
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Seed Drills and Wheel Hoes combined. Single Wheel Hoes, Double Wheel Hoes, Cultivators, Horse Hoes, Sulky Cultivators.

"Planet Jr." No. 8 Horse Hoe & Cultivator

here illustrated is the most complete of its kind ever offered to the farmer. It is stronger in design and construction. The amount of work and variety of uses to which it may be adapted will only be appreciated and realized after using one for a season.

DESCRIPTION—Frame—Extra long and high—hard to bend and slow to clog.

Shanks—Hollow steel and clamping both sides of frame, strengthening each.

Depth—Regulated by wheel and runner, instantly adjusted by lever.

Expansion—By lever from 9 to 25 inches.

Side Hoes—Are for taking from and putting to the crop. Set at all angles and are reversible. Can be removed and small steels put on.

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REPORTS.

United States Department of Agriculture, Washington, D. C. Annual Report Department of Agriculture, 1904. Report of the Secretary. Bureau of Chemistry. Bulletin 89. Injury to Vegetation by Smelter fumes.

Bureau of Plant Industry. Bulletin 74. The Prickly Pear and Other Cacti as Food for Stock.

Weather Bureau. Bulletin 35. Long Range Weather Forecasts.

Farmers' Bulletin 214. Beneficial Bacteria for Leguminous Crops.

Farmers' Bulletin 216. The Control of the Boll Weevil.

Farmers' Bulletin 217. Essential Steps in Securing an Early Crop of Cotton.

Alabama Experiment Station, Auburn, Ala. Bulletin 131. Co-operative Fertilizer Experiments with Cotton.

Colorado Experiment Station, Fort Collins, Col. Bulletin 94. Report of the Entomologist.

Bulletin 95. Early Cantaloupes.

Kansas State Board of Agriculture, Topeka, Kan. Fourteenth Biennial report of the State Board of Agriculture. This is another of those most excellent reports, for which Secretary Coburn has established a reputation. It is a volume of over 1,000 pages, from which anyone can learn every detail as to the productions of each county in the State, and as to the failure or success of all the different crops grown, with reports by representative farmers throughout the State of the cost of production of the staple crops, and of the position of the live stock industry. It is such a report as should be issued by every State Board of Agriculture and new settlers in any State could then fully inform themselves before settling as to the place most likely to meet their needs and requirements and the prospects before them. The series of reports issued by this Board are in themselves a history of the agricultural progress of Kansas.

Maryland Agricultural College Quarterly, February, 1905. Report on the Analysis of Fertilizers Sold in Maryland.

New Hampshire Experiment Station, Durham, N. H. Bulletin 115. Sixteenth Annual Report.

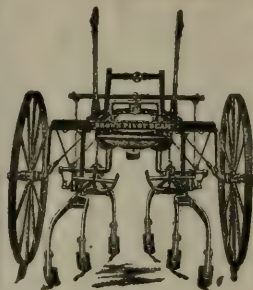
Bulletin 116. The Inspection of Feeding Stuffs in 1904.

Bulletin 117. Inspection of Fertilizers in 1904.

Rhode Island Experiment Station, Kingston, R. I. Bulletin 103. Experiments in Grass Culture.

Nebraska Experiment Station, Lincoln, Neb. Bulletin 87. A Test of Cal

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As much a necessity to-day as the Double Shovel was twenty-five years ago.

Farm labor is scarce and improved machinery is more in demand.

Our goods are thoroughly tested by years' of use and no line has a more favorable reputation on the market.

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meets every demand of a haying tool to properly cure hay. "Kicks it up" - lets it in the sunshine, so that no matter how heavy or how wet the hay will dry quickly. Color evenly and retain all of its goodness. The Johnstone does the work right - does it rapidly. Works without jar, with the least possible friction and consequent wear. Does the work just as it should be done with least expenditure of power and hand labor and with greatest comfort to the operator. The steel construction makes the machine light, compact, durable to the limit. We do not claim that this machine will not wear out. We hope to sell you others. Because of that hope, we build to please you always. We do guarantee that the Johnstone Tedder will last as long or longer than any other machines of the same kind. Our free catalogue gives all technical points and illustrates the line given the Grand Prize, highest award, at St. Louis, Mo., 1904. Write for it today.

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Send for Catalogues and Prices.

DEAD WEEDS - LIVE CROPS



The YORK IMPROVED WEEDER has square spring steel teeth, with round points, narrow in the body and of great flexibility - the most important essential of a weeder. Do not slash nor bruise the young plants as flat teeth do. Never clog, give greater clearance. The teeth being square, never break. The frame is made of strong, flexible, angle steel - handles and shafts are adjustable. Send for free circular. The Spangler Corn Planters and Grain Drills are the best.

THE SPANGLER MFG. CO., 505 Queen St., York, Pa.

DON'T BUY GASOLINE ENGINES

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline engine - superior to all one cylinder engines; revolutionizing gas power. Cost: Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost - portable, stationary or traction. Mention this paper. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mrs. Meagher & 15th St., Chicago. THIS IS OUR FIFTY-FIRST YEAR.

A FEW SPECIALTIES.

We are sole manufacturers of the WATT, CROWN and CRESCENT Plows. Made in sixteen sizes, and with interchangeable mould boards, adapted to every variety of work. They are sold on their merits and are guaranteed to give satisfaction.

DISC HARROWS with solid steel weight boxes. MOST DURABLE BEARINGS, with oil hole directly over axle, free from dust and clogging. ANTI-FRICTION ROLLERS, ADJUSTABLE SEAT, LIGHT DRAFT. Made in fourteen sizes.

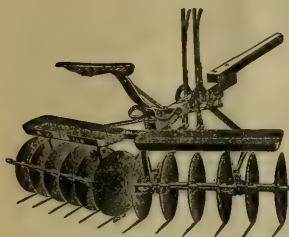
ALL STEEL LEVER HARROWS. One, two or more sections. Teeth instantly adjustable to straight or slanting without stopping team.

STEEL RIM ROLLERS with SOLID STEEL HEADS, which keep the earth from getting inside the drum, making the roller absolutely rigid. Built in seventeen sizes, with one, two or three sections.

THE MANURE SPREADER doubles the value of manure by covering two acres instead of one by hand, and will do the work of ten men with forks. THE MILLER is the lowest down spreader made, making it easy to load.

THE EMPIRE CORN PLANTER, with or without fertilizer attachment. The lightest planter made. Plants any quantity at any distance, accurately. No guess work.

DOUBLE ROW PLANTERS, with or without check rower, drill and fertilizer attachments. Adjustable in width, distance of drop and quantity.



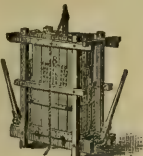
DISC HARROW STEEL WEIGHT BOXES.



SOLID STEEL HEAD ROLLER.



WALKING CULTIVATOR.



THE UNIT ROAD MACHINE.

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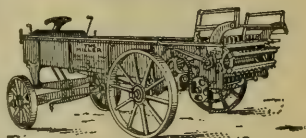
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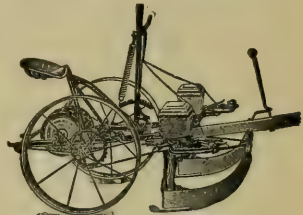
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Rations. Methods of Controlling Contamination of Milk During Milking.

New York Experiment Station, Geneva, N. Y. Bulletin 257. Home Made Soap for Spraying.

Bulletin 260. Directors Report for 1904.

Bulletin 262. Sulphur Sprays for Orchard Trees.

Texas Experiment Station, College Station, Texas. Bulletin 77. Onions and Bunch Crops at Beeville.

Virginia Department of Agriculture, Richmond, Va. Annual Report for 1904. In taking up this report immediately after the splendid report of the Kansas State Board mentioned above, we cannot but feel a sense of deep disappointment that the comparison of the two is so much to the disadvantage of that of this State. Instead of being a compendium of information of the work done by the Board and its officers, and of the conditions and crops of the different sections of the State from which an intended new settler could learn of the products of the State and the prospect of his success therein, and from which the farmers of the State could learn what successful farmers in the State are doing; it is practically merely a selection of extracts from agricultural journals, with a few original articles by agricultural writers. However useful this information may be to the farmers, it does not conform to what, in our opinion, a State Board report should be, with an income of over \$40,000 per year. Outside of the inspection and analysis of fertilizers which seems to cost about \$10,000 per year for inspection, analysis, and publication of the fertilizer bulletins and the money expended on the test farm (about \$5,000 in the last year) and which the president of the Board confesses has so far been a failure, in that it has never yet done any test work which has resulted in anything of benefit to the farmers or tobacco growers of the State, it is difficult to see what the Board or Commissioner has done. Much emphasis is laid on the great numbers of inquiries addressed to the Board by parties seeking to settle in the State, but nowhere do we find any information as to whether these have resulted in bringing new settlers to the State. Surely the Board might have given some reliable statistics as to the approximate number of new settlers who have come amongst us, and thus have given some evidence of good work done by the Board and its officers. The Experiment Station at Blacksburg, with an income of only \$15,000 per year is doing work of more value to the farmers of the State every day than the State Board and its officers do in a year,

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with an income of \$40,000. The one thing we find to commend in the report is, that at last the Board is decided to make a radical change as to the test farm. This decision ought to have been come to several years ago. The place as managed in the past has been simply a sink-hole for thousands of dollars every year without one atom of benefit to any one, except those employed upon it. It will never be anything else until placed under the control of a scientifically trained agricultural experimentalist. This we pointed out at the time when the farm was donated, and strongly urged such an appointment. If the farm is to be a test farm it must be under the management of a scientist. If to be a model farm it should be placed under the charge of a model farmer, a practical, up-to-date man, capable of making it an example of good economical management, and successful crop production. There is a clear distinction between a test or experiment farm and a model farm. Fifty acres, or, at the outside, 100, is ample for a test farm, and that area in the hands of a competent man could solve all the problems which vex the soul of the tobacco growers, and they were the per-

sons who were to be benefitted by this farm, and it was donated to the Board for this specific purpose. The excess of area beyond the 50 or 100 acres might be made into a model farm. Put a scientific tobacco expert in charge of the test farm, and a model farmer in charge of the other, and then some

results may be looked for. Virginia State Weather Service, Richmond, Va. Report for January,

Do not stop the Southern Planter until you have notice to do so, which will in all human probability be when I am dead or out of the farming business. J. W. COPELAND.

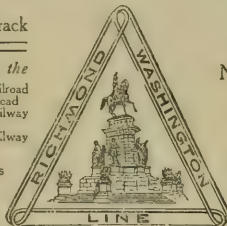
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The Post, Washington, D. C.	6 00	6 00
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

66th Year.

Richmond, Va., May, 1905.

No. 5.

Farm Management.

WORK FOR THE MONTH.

At the time of writing our opening article for the April issue (20 March) we were in the midst of an abnormally warm spell of weather for the time of the year which continued up to the end of the month. This had a most favorable effect on the crops which made good progress in growth and condition generally. This was general over the whole country and was reflected in the Government report of the 1st April. At that time the condition of the Winter wheat crop was reported as being materially in advance of that of last year and of the average condition for 10 years. The condition of wheat was put at 91.6 as against 76.5 a year ago and 97.3 in 1903, and an average for 10 years of 83.1. In Virginia the condition was 86 as against 69 in 1904, in North Carolina 92 as against 84 in 1904, in South Carolina 85 as against 82 in 1904, in Tennessee 89 as against 73 in 1904, and in Maryland 92 as against 71 in 1904. With a continuance of seasonable weather this would indicate a good crop of Winter wheat, but it should be borne in mind that the area seeded was less than that harvested last year and it is yet to be ascertained what portion of this reduced area has been abandoned and plowed up to be planted in other crops. In some sections we expect to see a considerable abandonment, as the stands were poor on account of being seeded in the drouth of last year. This will no doubt be the case in the Valley and some other sections of Virginia and the other Southern States, where the drouth was very persistent in the fall of 1904. The Winter oat crop will also largely be af-

ected by the same cause. The area seeded in this crop in the South was materially less than the average on account of the drouth, and stands are reported generally as being thin. The early opening up of spring throughout the country will no doubt result in the seeding of a much larger area in Spring wheat, and already much progress has been made in getting in this crop in the Northwest. The change from the abnormally warm weather of March to the cold weather we have had up to the time of this writing (20 April) in April, a change which has been general throughout the country, and has marked temperatures for most of the earlier part of the month, much below the average, cannot fail to have caused some damage and to have set back the average condition of crops. It is much to be hoped that we shall have a quick return to the normal temperature of the season. We have already had a number of freezes to this date (20 April), which have worked great havoc amongst the early truck crops of the South and cannot fail to have seriously hurt the fruit crop, especially peaches, pears and plums. Apples fortunately have not yet bloomed out sufficiently generally to be liable to injury. We have reports of damage to the strawberry crop, both in North Carolina and Virginia. The seeding of Spring oats has made slow progress in the South, but is reported as being well advanced in the West and North. Seeded so late as this period in the South the crop is not likely to be a satisfactory one. The hot weather will stop the growth and cause both straw and heads to be short. It is a mistake to waste time seeding Spring oats

anywhere in the South, except in the mountains, after the middle of March. Far better to devote the time to making a better preparation for the corn crop and to plant forage crops in May and June for feed for stock for which the oat crop is mainly used in the South. Clover and hay crops and pastures made a fine start in the warm weather of March, and notwithstanding the cold of April, are now looking well. We had alfalfa brought into this office in the first week in April from north of this city which was 15 inches high, and which at this writing is ready for cutting for hay. This is a most encouraging showing for this new crop in the South, the seeding of which we have persistently advocated for several years. There can be no question that with proper preparation of the land and inoculation of the seed or soil this crop is destined to work as great a revolution in our feeding problems as it has done in the West. A crop which will give a first hay crop in April and can afterwards be cut three times at least during the summer, and which will last from one seeding for 10 to 15 years, if only it receives proper attention, is one of such inestimable value that no effort should be spared to secure a good stand. In our last issue we published an article on the subject to which we direct attention. Whilst it is too late now to seed the crop in the South this spring it is not too late or too soon to commence preparations for seeding a good breadth in the early fall, say in August or September. Where land is foul with weeds the summer months should be devoted to killing out this crop, as alfalfa and weeds cannot live together. The weeds will win out and the alfalfa be lost. Break the land deeply and then cultivate every week or ten days, so as to encourage the germination of all the weed seeds that they may be destroyed by subsequent working. In this way by August the land should be comparatively free from weeds at any rate to a sufficient depth to ensure that the alfalfa when seeded without a further plowing of the land shall not be injured in its growth. Where land is not so badly infested with weeds perhaps the best preparation for the crop will be to break deeply, work fine, enrich with 400 pounds to the acre of acid phosphate and sow in Cow peas for a hay crop. This crop should make a sufficiently heavy growth to smother all weeds that may germinate and should be cut and made into hay in the first half of August and the land then have an application of 10 or 15 bushels of lime per acre, and be worked with the disc or cutaway harrow so as to get a seed bed of 4 or 5 inches, then have an application of 300 or 400 pounds of bone meal to the acre applied broadcast and be seeded with 20 pounds of

alfalfa seed per acre, the seed or land being first inoculated with the proper bacteria, which will be found offered by the Virginia Experiment Station and others in our columns. The seed should be harrowed in so as to cover it well and if the land be dry enough should be rolled. We have reports of excellent stands of alfalfa secured in this way.

In our last issue we wrote fully on the planting of the corn crop and to that issue refer our readers. Up to this writing but little corn has been planted north of South Carolina and the planting season is a late one. Every effort should be made to get the land ready and the crop planted as soon as possible, but do not, in order to secure this, neglect to make the best seed bed possible. Better be a week later and plant on a finely prepared bed than plant amongst clods and in wet cold land. No subsequent cultivation of the crop can make amends for a bad preparation before planting. As we have frequently said, the cultivation of the corn land should be done mainly before the crop is planted. The yield of the crop will be much more influenced by fine and deep preparation before planting than by either the fertilizer used or the subsequent cultivation of the crop. Use care in the selection of the seed to be planted. See by testing that the corn planted has a high germinating capacity, and that it germinates quickly and thus ensure a perfect stand. Let the seed planted be from selected ears of the type desired to be produced. The influence of the selection of seed is only just beginning to be realised. By careful selection continued for a few years Prof. Hays has increased the yield of a crop of wheat 20 per cent. and expects in a few more years to nearly double the yield. This influence is just as potent in the corn plant. In this way and by carefully cutting out all barren stalks in a crop a perfect stand of corn plants all carrying one or more ears can be had and the yield be proportionately increased. Every farmer should this year set apart a small field away from his other corn crop and in this field plant seed selected from his best ears, or better still from a crop which has been specially grown for seed by some of the growers who have already made a business of raising selected seed and give this crop special care and attention so as to ensure the best growth possible. In this way he can secure for himself seed for next year of a high productive capacity and acclimated to his section.

The cultivation of the corn crop when once planting is completed should have constant attention.

There is yet sadly too much of the old slipshod method of cultivation done to ensure good yields. Just "three workings" and no more is the rule with far too many farmers. In this work of cultivation no positive rule can be laid down as to the number of workings which the crop ought to have in order to ensure the best results. The best rule to observe is to cultivate after every rain so soon as the land is dry enough, and in a dry time to cultivate so frequently as to always keep the surface covered with a fine mulch of soil and that mulch free from weeds. The reasons for cultivation are threefold: 1, To destroy weeds; 2, to conserve moisture; 3, to aerate the soil. Of the three the most important is not the first but the second. Whilst it is always of importance to keep the crop free from weeds because weeds rob the soil of the plant food which should go to make the corn crop and also rob it of moisture, which is still more essential to the crop, yet the greatest need of the corn crop is moisture, and hence it is of the most importance to use the best methods for conserving this. Experiments made at the Wisconsin Experiment Station have determined the quantity of water necessary to pass through the corn plant in order to mature the plant. This station says that there is not enough moisture in any of the corn lands of this country with the average rainfall to mature the largest possible crop of corn. Only by frequent and shallow cultivation can the greatest conservation of moisture be secured and this cultivation should commence almost as soon as the crop is planted and should be continued until it is not possible to cultivate without breaking down the corn. The best implement to use for the first two or three cultivations is the harrow or weeder. This last mentioned implement is one of the greatest helps to corn growers that has been introduced. It enables good work to be done over a large area quickly, but in order to use it successfully (and this is one of its greatest recommendations) it must be used when the weeds are only just beginning to germinate and before they have had time to do any injury to the crop by the abstraction of food or moisture. The weeder will not destroy weeds after they have become rooted well. Its function is to prevent their growth and keep the surface soil loose and fine and this work it does and does well. If you have no weeder use a harrow. One or the other of these implements may be used until the corn is six inches high and in the case of the weeder until it is even nearly a foot high. Whilst harrowing or running the weeder over a crop 6 or eight inches high looks like using it badly and likely to cause damage to the plants, yet experience has shown that any injury done to in-

dividual plants is more than made up to the crop by the better and quicker growth of the whole crop. After the crop is too well grown to allow of the use of these implements a disc cultivator or a five-tooth cultivator makes the best work. *Never use a plow for this work.* The roots of the corn plant quickly run out into the space between the rows and by the time the plants are two feet high will have reached a long way towards the middle of the rows if the land has been properly prepared before planting the crop. By the time the corn is shoulder high the whole space between the rows will be filled with roots and every time a plow is put into the crop after the corn is a foot high will result in the cutting and breaking of some of the roots and every root cut or broken means reduction of yield or vigor of growth. Numerous experiments have been made to prove the truth of this statement in various parts of the country and without one single exception have absolutely demonstrated its truth. Not only has the use of a plow in cultivation this evil effect of cutting the roots, but it also largely tends to reduce the moisture in the soil by exposing large surfaces of the soil to the drying effects of the wind and sun. In this way two evil results are caused, both of which tend seriously to reduce the yield of the crop. No better illustration of the advantages of shallow and frequent cultivation can be given than an experiment made at the New Hampshire Experiment Station where certain plots were given no cultivation, other plots were cultivated five times and other plots were cultivated fourteen times. Some of the plots were cultivated shallow and others deep. On the plots not cultivated the weeds grew luxuriantly and the yield was 17 bushels of shelled corn to the acre. The plots cultivated shallow fourteen times yielded at the rate of 80 bushels of shelled corn to the acre. On the plots cultivated shallow five times the yield was 79 bushels of shelled corn to the acre. Where the plots were cultivated deep five times the yield was 69 bushels per acre. The only place where a plow may have some excuse for being used to cultivate the corn crop is on the rich river low grounds where climbing vines are so troublesome. These grow in the rows between the plants and as no cultivator can reach them, and hoeing is too costly, a light furrow may sometimes be thrown on them to smother them with advantage, but the space between the rows should be cultivated with a cultivator and not with the plow. Keep the land level at all times and throw no hills to the corn. The throwing of a heavy furrow to the corn at "laying by" serves no other purpose than to deprive the crop of roots and moisture both of which it most needs. *This*

it does by exposing a wider surface to the action of the sun and wind and by draining off the rainfall which falls on the land, and should be absorbed equally by the whole surface of the soil. The whole subject of cultivation may be summarised in the sentence, "*cultivate frequently and cultivate level and shallow.*" At the last cultivation sow Cow peas, Sapping clover, Crimson clover, rape or a mixture of all these in the crop broadcast. These will cover the soil and shade it after the time when the main crop has secured its needed food and will keep down weeds and make fall grazing, a winter cover for the land, and a crop to plow down in the spring.

The chopping out of the cotton crop should have attention as soon as the plants are large enough for it to be clearly seen which should be left to make the crop. The longer the work is delayed the less plant food there will be left in the soil for the making of the crop and the more spindling and drawn will be the plant left to fruit. Bring to a stand as soon as possible and then cultivate frequently and shallow. The same principles apply to the cultivation of the cotton crop as to the corn crop. Sow Crimson clover in the crop at the last working.

The setting out of the tobacco crop should have attention as soon as the plants are large enough. This year plants are reported late and small from nearly every section. This will make the setting out later than usual but will probably in the end result in a better stand and more evenly grown crop. Too often the plants get drawn and spindling in the beds from being ready too early. A small stocky plant well rooted will always make a better growth than a tall spindling one. The lateness of the plants will give the opportunity for better preparation of the land before setting and with this crop as with most others the cause of light yields is more often the poor preparation of the land than from any other cause. This is evidenced by the great difference in the weight grown per acre by different planters and the small average weight of the crop per acre in the South as compared with other tobacco sections. The further north one goes the greater the weight per acre grown. Here we make an average of about 700 pounds per acre whilst in New England and Wisconsin twice and even three times that weight is more nearly the average. Of course the type of tobacco grown has much to do with this difference in weight, but when we compare crops of the same type grown in this section by different planters we are unable to lay the whole difference to this cause. We have known several

crops of dark shipping tobacco grown in this section to reach 2,000 pounds to the acre whilst the average yield of this type is certainly not 1,000 pounds to the acre. In all the heavy crops reported to us the increased weight was in every case attributed to a more perfect and deep preparation of the soil rather than to the fertilizer used. In one case we have in mind the grower reported to us that the land was broken in the fall to the depth of 15 inches and was kept frequently cultivated to that depth until the crop was planted. In a recent issue of the Times-Dispatch we found reported a crop of Louisa sun-cured tobacco weighing 1,410 pounds to the acre and which made for 2,200 pounds an average price of \$20 per hundred. This shows the possibility of the crop when proper preparation is made. With such a yield as this there is money in the crop even at less than the ruling average prices. An old tobacco grower told us a short time ago that he could make money on the crop even at \$5.00 per hundred. In our last issue we wrote fully on the fertilizer best to use and to this refer our readers.

Peanuts should be planted this month. This is a crop the demand for which is constantly on the increase and prices have steadily advanced for several years past and the stock of nuts is now said to be small. The crop is grown on over 100,000 acres in Eastern Virginia and in 1899 the yield from this area was over 3,000,000 bushels, the average per acre being 31 bushels. In North Carolina about a similar acreage is grown with an average yield of 36 bushels to the acre. These yields are far below what ought to be made and are to be accounted for mainly from the fact that the crop has been grown year after year on the same land or at best in only a very short rotation with other crops. As showing what are the possibilities of the crop when grown in a proper rotation and with proper preparation of the land and the use of suitable fertilization recent experiments in South Carolina are instructive. At the Camden Station in that State a crop of Spanish peanuts made 143 bushels per acre. At the Fayetteville Station in the same State a crop of Virginia White Nuts made 113 bushels to the acre and a crop of Spanish nuts 109 bushels to the acre. We have known several instances of from 50 to 75 bushels to the acre made in this State which is more than twice the average yield. The crop, to make the best yield, should be grown in a rotation with Cow peas, Sweet potatoes and oats or other small grain and thus come only on the same land once in every three or four years. The land should also have a cover crop of Crimson clover

to be plowed down in the spring, grown on it every winter, and once in every rotation have 25 bushels of lime applied per acre. The Cow pea crop should have 300 pounds of acid phosphate applied to the acre and a fertilizer made up of 100 pounds of acid phosphate, 300 pounds of cotton seed meal and 65 pounds of muriate of potash, or 300 pounds of Kainit per acre should be applied to the land when preparing it for the planting of the nuts and be well worked into the soil. With such a rotation as we have suggested and the use of the fertilizer mentioned and fine preparation of the land we are satisfied that much greater yields can be made.

The growing realization of the importance of live stock as incident to the profitable running of a farm in the South has compelled attention to the production of forage crops for long feed for the stock during winter. This is one of the most cheering development to be noted in Southern progress. No agricultural community anywhere ever became and remained permanently prosperous in the absence of live stock. Without them fertility cannot be maintained nor can staple crops ever long be profitably produced. The neglect of live stock is the great cause of our millions of wasted acres in the South. With the introduction of improved stock and its multiplication on our farms fertility will come back to these acres and prosperity to the people. As a necessity of the introduction of better stock and more of it comes the duty of providing more and better feed. No longer is it sufficient to rely upon the corn fodder produced as an incident in the making of the corn crop. This of itself whilst valuable when properly cared for and saved can never meet the requirements of the stock keeper. He must grow forage crops of various kinds to provide a constant supply of good nourishing feed to be converted into beef, mutton, bacon and milk and butter. Whilst the grasses, clover and alfalfa are necessary adjuncts to every stock farm and should be produced as largely as possible there are other crops of equal importance and these the South can produce better and in greater variety than any other section of the country. Amongst these and of pre-eminent value in both a feed and land improving character are Cow peas and Soy beans. To these should be added Corn for the silo, Sorghum, Kaffir corn, the Millets and in the country south of the James Teocinte and Velvet beans. All these crops can be grown on every farm in the South if only proper preparation be given the land and they can be so produced without the necessity for curtailing an acre in the production of corn, wheat, cotton and to-

bacco. Their production can be so timed as not to interfere with the work of producing the staple crops. When the corn and tobacco has been planted and in the intervals between the cultivation of these crops land should be prepared and forage crops be seeded. The better the preparation given to the land and the better these crops will succeed. On the poor thin lands they should be helped to make a start with some acid phosphate the cheapest and in our lands the most needed of all fertilizing agents. If the land to be put in forage crops be given a dressing of 25 to 50 bushels of lime to the acre in the fall or winter months on much of the area but little other help would be needed to get a fair forage crop and if this be followed by 300 or 400 pounds of acid phosphate per acre previous to seeding the crop and costing only about \$1.50 or \$2.00 per acre, a successful growth can be almost certainly assured.

Soy beans should be first planted as they make a long season of growth. They should if possible, and certainly if intended for a grain crop, be planted in May. Where this is the intention plant in drills two feet six inches apart and drop the seeds one foot apart in the rows. Cultivate like a corn crop. This is one of the leguminous crops which largely depends for its success on inoculation with its specific bacteria, and therefore where the crop has not previously been successfully grown the soil or seed should be inoculated with bacteria at seeding. This bacteria can be obtained from the Virginia Experiment Station at merely the cost of 25 cents for each acre to be planted. The crop may be seeded in June for a hay crop of which it makes a heavy yield on good land properly inoculated. For hay sow in rows or broadcast. If in rows a peck of seed will plant an acre if sown broadcast sow half a bushel. Grown in rows and cultivated once or twice makes the best crop.

Cow peas may be sown from May to the end of July. Whilst these are usually sown broadcast at the rate of one bushel to the acre and harrowed in, a better crop with a much less cost for seed (and this is an item worth noting now that Cow peas are so much higher in price than formerly) can be made by seeding the crop with a grain drill stopping up every other spout. If the crop is to be grown for the seed, plant like corn in rows two feet six or three feet apart and one foot apart in the row will make more peas than when put in in any other way.

Sorghum may be grown either for a fodder and seed crop or for hay or it may be grown for making silage of which it makes a fine quality. If intended for fodder or for the silo it should be planted at the same time and just as corn is planted for the same

purposes, that is in rows three feet apart and from six to twelve inches apart in the row. It should be cultivated like a corn crop and will make fine fodder and seed. The seed is as good feed as corn and may be ground and fed to stock in the same way, the heads being cut from the stalk when ripe, or the crop may be cut down at the root and be shocked like corn and when cured be fed with the heads on to the stock. The best way to save the crop when grown for fodder is to make into large shocks and leave these in the field until wanted. It does not keep well when hauled from the field and stored in bulk in a building. It is so full of juice that it is difficult to cure it so that it will bear storage in bulk. It damages very little in the field even though it is allowed to stay out all winter. The stalks keep full of sweet juice through the moisture which they absorb from the ground. As silage it is cut up and stored in the silo just as corn is made into silage. When grown for hay it should be sown thickly broadcast, say at the rate of half or three quarters of a bushel to the acre and be cut before it comes into head. It grows in this way with a fine stalk little thicker than straw and makes good hay requiring, however, to be well cured before storing in bulk. It makes an excellent crop to grow with Cow peas for hay as it holds up the peas. When grown in this way it should be sown at the rate of a peck to the acre with half or three-quarters of a bushel of peas and be cut before coming into head or just when forming the head.

Kaffir corn should be grown in the same way as sorghum and be saved and used in the same way. It is a non-saccharine sorghum and very resistant to drouth and it is wise to always plant some so that if a drouth should occur there will still be a feed crop made. Whilst not so rich a feed as the saccharine sorghums it yet makes good fodder and grain.

Millet.—Of millet there are several varieties deserving of growth. Cat tail millet sometimes called *Pencillaria* makes an excellent crop for early green feed or hay. Sown broadcast in April or the beginning of May it will make a crop ready to cut for green feeding in a month or six weeks depending on the richness of the land and the warmth of the weather and if not needed for that purpose may be made into hay. It should be cut for hay before the seed forms. If cut before the seed heads form it will often put up a second growth worth saving for hay. German millet is another good variety to grow for hay. It may be seeded broadcast at any time from May to the end of July and should be cut for hay when in bloom and before the seed forms. Hungarian grass is an-

other variety of millet which makes good hay. It should be seeded broadcast at any time from May to the end of July. Many good farmers grow millet with Cow peas and say that the mixture makes an excellent hay and that the millet helps to make the saving of the pea vines easier. The only objection we have seen to the practise is that the millet matures so much more quickly than the peas that the mixture has to be cut before the peas have made their best growth. In seeding the mixed crop sow half a bushel of millet and half a bushel of peas to the acre. Millet when sown alone should be seeded at the rate of one bushel to the acre.

Corn for silage should be planted in June or July so that it may have time to make corn and thus become fairly matured before being cut and put into the silo. The better matured the crop, short of being fully matured and drying up, the better and sweeter will be the silage made. Plant in rows three feet apart and six to eight inches apart in the row so that it will have a chance to make ears on a large proportion of the stalks and be open to the action of the sun and air to mature it. Cultivate two or three times. Silage is the finest feed and the most convenient to feed, of any crop grown and more feed to the acre can be secured in this form than in any other. From 10 to 20 tons of corn ready for the silo can be grown to the acre and this can be put into a less space in the form of silage than any other crop. Every stock keeper should have a silo. Corn silage can be grown and put into the silo for less than \$1.00 per ton.

When planting the corn crop do not neglect to mix some pumpkin seed with the corn. The Virginia Mammoth is a good variety to sow. Mix a pound of this seed with a bushel of corn and drill in the ordinary way. The pumpkins will make good feed for the hogs and cattle in the fall and early winter and will not reduce in any way the yield of the corn crop. Some farmers indeed contend that they help the corn crop by shading the land with their large leaves and thus conserve moisture. A field of pumpkins planted alone will be found very useful if the land be available. They require a good fertile soil to make a heavy crop. Plant in rows six feet apart and six feet apart in the rows.

WOOD HOOPED SILO.

Editor Southern Planter:

The wood hoop silo has been in use some years and so far as I can learn is giving perfect satisfaction. Where one is built in a neighborhood others follow

which is a fair showing that they are all right. A good method of erection is as follows:

Dig a ditch 20 inches wide and 2 feet deep in a circle. The diameter of the circle to the outside of the ditch should be 20 inches wider than the proposed silo so that the silo itself will rest on the middle of the wall with 10 inches space on each side of the staves. Place in the trench six inches of small or broken stone and pour on a mortar made of one part cement to four parts sand and repeat till the wall so built is flush with the top of ground, then build a wall one foot high of larger stone or concrete on the top of the rubble wall, this raises the bottom hoof so that there will be no dampness from the ground to cause decay.

Next, erect a scaffold *inside* of the foundations as high as silo is to be deep. To make this place four posts 2x4 as far apart as possible, and *brace them well*. These posts may be in two sections and bolted together in the center, which will make it easier to remove after the silo is complete. On the top of the 2x4 posts place two pieces 2x4, set edge up and fasten securely. These are to support the top hoop and should be 6 inches longer than where a plumb line from circle on foundation strikes each piece.

At a point about $3\frac{1}{2}$ feet from the top of the ground nail around the four posts four planks having *one end of one plank* to project over the circle 10 inches, with a notch four inches wide and inside of notch plumb over circle on foundation. On these planks nail 1x3 pieces 8 inches apart so that the ends will project over the circle; next take a straight edge and fasten on top of these laths over the center of the circle, so that it can revolve and one-half the diameter of silo in length; strike a circle on these laths; saw off the projecting ends and nail them on the ends of the 1x3's. This will make a form on which the hoops rest.

To make the hoops take $\frac{1}{2}$ x3 inch oak, elm or Georgia pine and in as long length as possible, free from knots, and with ends beveled, place the bevel of outside piece in the center of inside piece and fasten in the notch with a wedge, then bend to the form and nail first in one edge and then the other with four-penny nails, when you come to the beginning ends *be sure* the hoop is *fitting tightly* to the form all around before fastening. Should it not be the hoops will not all be of a size and make a bad job. The hoops at the bottom should be six double, say half way up, then five double balance of way.

Make the bottom hoops first and let them rest under the form, then the top hoop, and when it is made bore six one-half inch holes in it so they will

come near the ends of top supports, raise it to the top and place perfectly plumb and level over circle and toenail to the 2x4 cross piece to hold it in place, then take another 2x4 as long as the diameter of the silo on the end of one side nail pieces having them to project over six inches, place this across the top of the 2x4, letting the pieces nailed on ends come *under* the hoof.

Be sure to have this top hoop level and plumb on *inside over circle*.

Next bolt six pieces of clear plank 1x6 to top hoop, letting them hang down. Then as each hoop is made raise it and tack with eight penny nails to these plank being sure to have each one level and the correct distance apart. They should be twelve inches at bottom and increase by two inches up to the fifth hoop, then four inches to the eighth and balance about three feet for a 30 foot silo. By this method the top hoop supports all the hoops till the bottom one is in place when the bottom hoop and suspended plank take part of weight.

After the form on which the hoops were made is torn out commence nailing on lining (7-8 inch Georgia pine flooring 3 inches wide, is all right). *Be sure the first plank is perfectly plumb*. Commence at point where door is to be, and drive each plank up *tight* and nail 'toeing,' join plank on hoops toward top, breaking joints and sawing with a bevel so the top plank will lap on inside of lower ones. A "dog" made of a piece of heavy iron in shape of a "U" with one side longer and wide enough to drop over the hoops will be a help in making tight joints. It must have two holes ($\frac{1}{2}$ inch) opposite each other, so that an iron rod will pass under hoop; then with a stick for a lever one can make a good tight fit.

As the suspending plank are reached they are to be taken off.

When within 20 inches of beginning stop lining except first four feet at bottom and six at top, the last piece in these two places will have to have part or all of tongue or groove taken off. Make as close joint as possible and cover with a strip of tar paper tacked on. The doors are to be made of same material as lining, but placed parallel with the hoops and four inches longer than door is wide. Nail onto short battens so one section will about close the space between two hoops. At bottom of door and six inches lower than bottom of opening *nail on* a piece that is made to fit the circle, then at each side of opening, from bottom to top, nail pieces of inch stuff so that the doors will fit tightly between. then and as the silo is filled place in the door and place a curtain of tar paper over doors and pieces on side, the doors need

not be nailed as the pressure of silage will hold them in place.

After the doors are made, the pieces nailed on each side of door, go over it all and if there are any knot holes or cracks fill them with cement or place tar paper over them and tack well.

Make a ladder of 2x4 stuff clear of knots to reach from bottom to top and bolt in position beside the door, and if a slat carrier is to be used, at the point where it is to come over edge of silo make a frame for same to rest on.

Now tear out the scaffold and cement around bottom hoop, allowing cement to come up three inches on lining. Cement bottom so it will slope to center.

If the silo is outside a building, as it should be, you will need a chute over the door to put silage down through. This can be made trough-shape with one side and bottom solid and the side next the door in sections and hinged to bottom so that as the silage is fed out the feeder can open these doors and go into silo without having to climb over top each time.

If the silo is in an exposed place to wind it should be guyed to prevent wind from moving it while empty. No cover is necessary or desirable—rain will not hurt the silage and snow will soon melt off.

Wythe Co., Va.

WYTHEVILLE.

HIGH MANURING AND INTENSIVE CULTURE OF COTTON—A B C OF FERTILIZATION.

(Continued.)

Editor Southern Planter:

In the preceding article, I have tried to give, in as plain and brief a manner as possible, the general principles upon which a rational economical, scientific and yet pre-eminently practical system of fertilization for cotton may be, should be, and must be, based if best results (i. e., largest possible yields) are ever attained; I propose, in this present article, to still further elucidate the matter by reducing it to practice in so easy and simple a manner that "he who runs may read." It must be understood at the outset that unless otherwise specified, I speak of a normal growth in a normal season.

Where stalk growth is deficient, it may be very safely inferred that the soil is very poor and that a complete fertilizer is indicated.

Where stalks are small, but exceptionally fruitful, considering their diminutive size, nitrogen, and probably potash, are indicated.

In all instances where cotton does not fruit as freely as it should, phosphates are indicated.

In all instances where the bolls are sufficiently

numerous, but small, inferior and ill-developed, potash is indicated, and may be beneficially applied in quantities ranging from 50 to 200 pounds of either the muriate or sulphate, preferably the latter. The sulphate has always given best results with me; though the muriate has always given good results, and never acted injuriously in any quantity applied by me (and I have used it far more liberally than the general run of farmers are likely to do, that is, from 50 to 200 pounds per acre), I have found the sulphate to act the best and its beneficial effects to last the longest, promoting a healthy and vigorous growth of a deep green (almost blue) color for four years in succession with but a single application the first year, and no other fertilizing agent of any kind applied to same land in the interim to mar its effect.

Where cotton "rusts" rotate the crop and fill the soil as full of vegetable matter (decayed, or at least partially so) and apply kainit at rate of from 200 to 400 pounds per acre; or the muriate may be used at the rate of from 50 to 100 pounds and will be found equally beneficial with the kainit. Land where cotton rusts, should likewise be liberally fertilized, as rust will hardly injure cotton when in vigorous growth, but seizes on that of enfeebled vitality almost exclusively. Fertilizing as liberally as I have done in the past, I have never had a single stalk of cotton to rust where fertilizers had been applied. Rust is a disease of enfeebled vitality, and the way to counteract it, is to obtain and maintain a healthy, active and vigorous growth. This latter, liberal and judicious feeding will accomplish.

In low lying (alluvial) lands, that have an apparent excess of nitrogen, apply phosphates freely, 800 to 1,000 pounds, together with at least 100 pounds of muriate or sulphate of potash per acre; apply, by hand, broadcast, during winter or very early in spring, when practicable, prepare the ground deeply and thoroughly; plant a good, early variety, give good distance, 4x2, 4x3, or on poorer land 3 feet by 3, and on very rich land 4x4, 4x5, 5x5 or even 6x6. Cotton is naturally of a pyramidal form. Don't deform it by crowding; whenever you do this, in every single instance, you diminish the yield. I have seen a stalk not over 7 feet high with upwards of 10 pounds of seed cotton on it: I have also seen cotton stalks 12 to 15 feet high that had been subjected to the "crowding" process with 0 to 6 bolls each. Cultivate shallow but often (every week, if possible), and lay by early, but clean; with this exception that, whenever a crust forms on the surface, after a rain, in July or August, whenever it is possible without doing damage by breaking the limbs, etc., this crust should be

broken and a mulch of loose dirt be obtained and maintained to check evaporation and consequent shedding of bolls from lack of moisture. This done and with a favorable season it becomes fully as easy, and far more satisfactory as well as profitable, to gather bales per acre instead acres to make a bale.

While on this subject, I would invite the reader's attention to the fact that the "color" of the foliage, as also its degree of sparseness or density, or in other words, its degree of luxuriance or non-luxuriance, is oftentimes fully as sure an index of the needs of the growing crop as is growth of the stalk itself and its degree of fructivity or sterility or barrenness.

A pale sickly yellow color may be invariably considered as indicating a lack of nitrogen, the which may often be remedied immediately by the application of 100 to 200 pounds of nitrate of soda per acre, applied close to, but not on, the growing plants, when they are neither wet with dew nor rain. This "pale, sickly, yellow color" referred to, is a species of "anæmia" or bloodlessness, and lack of vigor; that indicates not only a lack of nitrogen, but of potash likewise; hence, it oftentimes takes a liberal application of both to induce, or rather to force a healthy, robust, vigorous growth.

G. H. TURNER.

Burgess, Miss.

SOY BEANS.

Editor Southern Planter:

In your March issue Mr. Julian M. Ruffin says he "is thoroughly convinced that Soy beans do not improve the soil but tend to exhaust it considerably," and gives as a reason for such opinion the fact that in several instances wheat which followed Soy beans did not do well as compared with wheat following peas. I contend that the results he cites do not warrant his conclusion, for those results can be easily accounted for in other ways.

He says wheat did much better after peas than after Soy beans. Well, one cause of that is: Pea roots and stems are soft, fleshy and as perishable as mushrooms, as a consequence the wheat derived nitric acid almost immediately from the decaying peas—just when it wanted it most. On the contrary Soy beans have hard woody stems and roots which decompose quite slowly. Hence the wheat which followed them did not have available plant food in time and like a stunted shote it never recovered from the check it got in its babyhood. Had the Soy bean stubble been plowed, say one month earlier than where the peas grew, and all sown to wheat at the same time, there might have been an evenner crop of

wheat. Were a farmer to break a clover sod on October 1st and a pea stubble on the same day, there most likely would be a marked difference in favor of the peas. But the farmer would not be warranted in coming to the conclusion from such a result that clover exhausted the soil and peas improved it.

Peas are undoubtedly a fine preparation for fall grain for the foregoing reason, but their too rapid decay unfits them for crops sown the following spring unless a cover crop intervenes as a nitrogen trap. Soy beans are a splendid preparation for corn for me on a light grade of bottom land which quickly showed nitrogen hunger when tended in a rotation of corn and oats. The fat, dark blue green fodder and heavy growth after Soy beans was very encouraging indeed. Yet that very land showed no marked improvement even after a fine growth of peas. Such land is liable to overflow and though rich in all plant food except nitrogen it quickly runs down, is leachy in fact.

Furthermore peas are an old crop in Hanover county, Va., and are planted everywhere. But Soy beans are a new crop not so extensively sown. As a consequence the Soy beans were not so fully and so early stocked with nodules. I say this without fear of contradiction although I never saw the crops to which Mr. Ruffin refers, and although he says the roots of both crops were full of nodules, I have for a long time studied up this nodule business and have seen enough to convince me that it takes a long time to stock a farm and to keep stocked, much more a whole neighborhood with any new species of nodule. My farm inoculated Soy beans from the start but the difference between crop No. 1 and crop No. 2 on the same land is very great. On land where five years ago I thought them fine when three or four feet high they last summer grew four and a half feet high on the level and the ground after they had been cut and raked off was as bare of vegetation as if it had been just plowed and harrowed. It is not enough to have a few nodules on each plant root. They must come on it almost as soon as it is formed. Even while it is in seed leaf. That is the stage of growth when nitrogen does most good. They must be plentiful or they do little good. Leguminous plants are unusually rich in nitrogen and they *don't get it all from the atmosphere*. If they are not well stocked with nodules they *draw heavily upon the soil nitrogen*. No class of plants, I believe, are more hungry for nitrogen or search the soil more thoroughly for it. I feel sure that one reason peas have grown so popular as a summer catch crop is due to this very quality. In the sultry showery weather of our Au-

gust the process of nitrification goes forward with extreme vigor under the shade of a pea crop and the pea roots are as greedy of nitric acid as a hungry cat is of mice, and if the peas never had a nodule on them, the advantages would well warrant a farmer in sowing them, and what is true of peas in this respect is also true of Soy beans. Mr. Ruffin's Soy beans were not stocked soon enough nor thoroughly enough and they *drew upon the soil nitrogen and added very little to the stock of it.* They were then *mown or pastured off.* What better were they then as a preparation for wheat than sweet potatoes or melons? These are notoriously bad in that respect notwithstanding the fine tilth in which they leave the land. The sweet potatoes and melons use up the available nitrogen in the soil late in the fall and not enough is liberated in time to do the fall sown grain much good, so likewise with Mr. Ruffin's wheat after Soy beans, with this added disadvantage that the Soy bean roots were slower to decay than any of them.

Growing legumes is quite a complicated business. There are two sets of plants to be raised at the same time. The host and the parasite. The seedsmen furnish us with the seed for one and there is far too much taken for granted in respect to the soil furnishing the seed for the other. Notwithstanding that the wild vetch grows in the woods all around my farm it took quite a while to get some places stocked with vetch microbes. Soy beans have to be sown two years in succession to get fully stocked. Even peas have to be helped on new places. It was hard to get Crimson clover to start right, and now for two years I am having a very lively controversy with alfalfa and only begin to see hope of success. Although I have used ashes and lime and inoculating material from the Agricultural Department at Washington, also inoculated seed from there, besides which I got "alfalfa soil" from a friend living in the bottom limestone country below Montgomery in this State, on whose farm alfalfa succeeds like success. Surely here is a field where the experiment stations could do great good. Ours at Auburn, Ala., has done more to throw light on this most important subject than all the other stations put together and by all means this work ought to be followed up.

Clay Co., Ala.

JOSHUA FRANKLIN.

A BATTLE OF GIANTS.

Editor Southern Planter:

For three years I have watched a piece of land of about five acres. It was almost a solid sod of wire grass (Bermuda) when the last tenant left it in corn

ridges. The following year some broom sedge appeared. The third year broom sedge predominated and the wire grass began to disappear. In another year the wire grass will probably be almost entirely routed. This land was not pastured.

On pastured lands wire grass not only held its own against broom sedge but came out victorious. For good grazing the pasture should be broken up every few years and other grasses sown in the wire grass.

Will Johnson grass crowd out broom sedge? Does Johnson grass grow in tufts like broom sedge so as to make mowing difficult? Will Johnson grass do as well for hay north of the James river as it is reported to do further south? Have any readers in Eastern Virginia tried it? Will it grow on poor, gravelly soil?

The other day a new-comer, who had read a great deal about brome grass (*bromus inermis*, awnless brome) engaged the writer in a conversation on a westbound train. From what he had read he sung the praise of brome grass, which the writer, having seen a great deal of it in other countries, seconded. Next the new-comer said that he had bought a farm in Virginia with hundreds of acres of brome grass. The writer became immediately very much interested and inquired whether the grass had proven a success on that farm.

"Why, it grows wild all over the place," exclaimed the new-comer with great satisfaction.

A few questions were sufficient to show that his "brome grass" was broom sedge, the worst enemy of our Eastern Virginia meadows. The new-comer was very disappointed when the difference was explained to him.

Have any readers of the SOUTHERN PLANTER experience with brome grass (*bromus inermis*)? and on what kind of soil? Will it do on poor gravel?

By the way, I notice that our agricultural college has been granted a new building. Glad to hear it. I think, however, that the securing of Prof. Soule is of greater importance to our State than a dozen new buildings.

Why don't we hear something about drainage and irrigation from the Agricultural College or Experiment Station? There is plenty such work to be done in the future in Eastern Virginia. Nowhere is the need greater.

Prof. Soule's article on sorghum contains splendid advice. A patch of Teosinte in addition to sorghum is a mighty good thing to have when other feed and grass is short during the hot season. But, of course, still more necessary is alfalfa. N.

We have reports from farmers north of the James that Johnson grass makes a good hay crop on land too thin for the best success of the best hay grasses.—Ed.

FERTILIZER FOR COW PEAS.

Editor Southern Planter:

Mix 400 pounds of muriate of potash with 1,600 pounds of acid phosphate and apply from 200 to 600 pounds per acre, depending on the quality of soil.

For cow peas apply the fertilizer in drills, as close as will admit of proper cultivation, say three feet apart, and mix with the soil, preferably a month before seeding.

If large results are desired, a second application of fertilizer, of the same quantity as the first, may be applied to the peas in side furrows, one-half on either side, at the first or second working. A peck of seed per acre, in connection with thorough cultivation will be ample for improvement or forage purposes.

If a crop of dry peas is desired, single stalks should be left in the drills, 12 to 18 inches apart, the residue being pulled up, not cut off. When cut the stubs appear to sour and exert a bad effect on the growing plants. The "Wonderful" variety of peas for bearing purposes require as much distance as corn, and double this distance would probably be none too much.

Dry peas (beans) are much richer than the vines and make an excellent fertilizer. If turned under with the vines, the weather should be sufficiently cold to prevent the peas from sprouting.

After the vines have been turned under, the sod should remain undisturbed until the following spring, when it may be properly prepared for any crop, such as corn, cotton, potatoes (Irish or sweet), etc.

A good crop of pea vines will not only draw from the air the nitrogen needed for the crop, but, in addition thereto, a large excess. Therefore, in order to correct this excess, from one-half to a full application (300 to 600 pounds), of the above fertilizer should be applied to the pea sod before seeding thereon. Any excess of potash and phosphoric acid would do no harm. They would remain in the soil for the benefit of the next crop.

An objection to the above plan is that it is costly. We will look into this feature. We will put the cost of the fertilizer (600 pounds) at \$6. An acre in peas will easily yield 20,000 pounds of green vines, which are equivalent to about 100 pounds of nitrogen worth

in the market \$15. This nitrogen is equivalent to that which would be supplied by about 600 pounds of nitrate of soda and is drawn from the air, virtually grown.

Potash and phosphoric acid applied to the peas will, in the main, be drawn up by the vines. We, therefore, have in the soil for the benefit of the next crop, fertilizer of the following values:

Six dollars and \$15, making a total of \$21. If fertilizer be applied to the pea sod, as suggested, the value will be increased to \$27. With this quantity of fertilizer, in connection with thorough cultivation from start to finish, ordinary yields can easily be increased from two to eight times, and the land left in good condition for several years. I, therefore, urge farmers to try one or more acres, according to the condition of their purse.

BYRON TYSON.

Monroe county, N. C.

When the application of fertilizer is in excess of 200 pounds to the acre, we would advise that it be applied broadcast, and be thoroughly worked into the soil.—Ed.

CURE FOR CHICKEN CHOLERA

Editor Southern Planter:

A small piece of well-cooked corn bread, a liberal pinch of ground black pepper, three or four small pieces of cooked fat meat, several pieces of finely-cut red pepper, four to eight drops turpentine (regulate by age of fowl). Soften slightly, so that it will stick together after mixing thoroughly. Force this down the throat of the fowls. Give plenty of fresh drinking water and keep corn before the fowl all the time. Isolate the fowl and repeat the dose at least four times a day, but give only two or three drops of turpentine after first dose. I have never lost a fowl when treated as above stated. I have cured chickens with a single feeding. One turkey hen was badly diseased, and was cured with four feedings. The entire mixture ought to be about a tablespoonful. Make up just enough for a feeding. I find turpentine fed in corn bread crumbs very fine to prevent or cure gapes. This was an idea of my own, which has proven effectual when ever used. I was born and raised in the limestone section of Virginia, and cholera is as prevalent there as in Eastern Virginia. I hope others may find this as satisfactory as I have found it.

Albemarle Co., Va.

MRS. LAYTON RODES.

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The cold weather of April and the severe frosts we had from the 17th to the 20th will we fear have caused serious damage to early planted truck and garden crops. Many of these crops will no doubt have to be replanted and thus add to the work of a month which is always one of the busiest of the year. Wherever crops have been seriously cut down it will almost invariably be found the best way to plow down and replant the whole crop rather than endeavour to mend the stand by partial replanting. Damaged crops are slow to make a new start in growth and later planted ones on a fresh seed bed will usually be found to beat them in the end.

The work of seeding and planting out all the staple crops of the garden and truck patch should have constant attention until all are in the ground. The hardiest ones such as cabbage, English peas, onions, spinach, carrots, beets, lettuce and Irish potatoes should have first attention. Later in the month Sweet corn, Snap beans, Lima beans, Pole beans, squashes, cucumbers, cantaloupes, melons, tomatoes, peppers and egg plants should be put in and at the end of the month or in the first week in June sweet potatoes should be set out. If our advice in the last issue has been followed the land will be ready for all these crops and will only require to be freshened up by harrowing or raking before the work of planting is done.

Whilst rich soil is absolutely essential to the growing of nearly all the vegetable and truck crops yet it is very possible to make the land too rich for the production of the heaviest crops of peas and beans. These when the land is too rich are apt to run to vine instead of making pods and seed. In planting these crops therefore be careful to select suitable land. A piece of land fertilized heavily last year for other crops will usually grow peas and beans successfully without further fertilizer. When planting pole beans and Lima beans see that the stakes upon which they are to run are deeply set in the ground and are good sound stakes. Many a good crop of these beans has been lost by being blown down and ruined when first setting the crop from neglect of this precaution.

Onion plants raised from seed in beds should be set out in rows wide enough apart to admit of cultivation with a small cultivator like the Planet, Jr. Set the plants about four inches apart in the rows. When the bulbs begin to form the soil should be thrown

from them so that the onions shall be made and mature on the top of the land. When plants have not been raised seed should be sown at once in rows a foot or fifteen inches apart. Sow the seed rather thickly so as to ensure plenty of plants. When the young plants are as thick as a quill they should be thinned out so as to stand about three inches apart. Pearl, Southport White Globe, and Prize Taker are good varieties to grow. It used to be said that we could not grow good onions from the seed in one year in the South, but we have grown as good onions here in that way as we ever grew anywhere. The soil should be rich. The onion set crop is one also worth attention as there is always a good demand for the sets. The land for this crop should not be rich but of fair fertility. Sow the seed very thickly in wide rows a foot apart. Do not thin out. As soon as they ripen they should be pulled and cured with the tops on.

Tomato plants should be set out as soon as the weather is warm enough. In our last issue we gave advice as to the fertilizer for this crop. Set the plants four feet apart each way and plant a hill of corn every few yards. This will save the tomatoes from the worms which prefer corn to tomatoes when they have a choice.

Cucumbers, cantaloupes and squashes should be set out in hills four or five feet apart each way and should have a good shovelful of manure and a handfull of good fertilizer put in each hill. Plant three or four seeds in each hill and when the plants have got the second leaves thin out to one plant. In our Spray Calendar in the March issue we gave advice as to the remedies for bugs and diseases which trouble these plants.

Cultivate all growing crops frequently and keep down all weeds.

Plant successional crops of sweet corn every week or ten days until the end of July.

HOW TO GROW MELONS.

Editor Southern Planter:

Being a reader of the SOUTHERN PLANTER for a number of years and after comparing it with almost every paper of its class that's published in the South, I have decided that the methods and advice given

through its columns are the surest, quickest and most economical.

I do not claim to know it all, neither do I claim to know the greatest part of it, but after several years of careful study I do claim to know something about watermelons.

As to location, the watermelon is a Southern plant. Whilst they grow melons in the North profitably the fruits gradually loose their size, and delicate flavor. If grown throughout the sand belt of South Carolina, Georgia and Alabama they improve in every respect each year. The cantaloupe reverses this rule. A cantaloupe should never be planted in this section more than four to five years at the most. Whilst it will increase in size, it loses that delicate and sweet flavor you usually find in cantaloupes raised from Northern grown seed.

Soil.—A melon requires a soil with a very dry top soil, and as damp an under-soil as possible, and for this reason melons will do best on land that has been in broom sedge for a number of years, as the roots and stubbles keep the top soil porous and easily dried out.

Preparing the land. Break the land good and deep with a single plow (I prefer a "Dixie Boy"), following in the same furrow with a "Bull Tongue," breaking the under soil as deep as possible in order that it may hold as much moisture as possible, after this harrow and re-harrow as many times as you deem necessary.

Lay off your rows 9 or 10 feet apart, cross plow laying off rows 6 feet apart, take a two-horse chill plow and run on each side of your furrow the 10-foot way, throwing the earth out as deep as your top soil allows you. This should give you a ditch 18 inches at top, 12 inches at bottom and 6 to 8 inches below the surface. In this ditch run a sub-soiler or a Bull Tongue up and down until you get it thoroughly broken 12 inches deep or more. In this and on top of the loose under soil put your stable manure, about the quantity recommended by the PLANTER, which if calculated you will see is from 200 to 300 pounds for one acre row; be sure to spread it evenly and all over the bottom of your ditch, on top of this sow with your hand (so as to spread it out as much as possible) 250 to 300 pounds fertilizer made up of equal parts 13 per cent. acid phosphate and kainit. Take your 2-horse chill plow and throw two furrows on this, running as close and deep as possible and your land is ready for the seed.

Planting. By all means do not plant too early. While you may get a good stand early and be able to save it, yet if the weather is the least bit cold your

plants will be slow in growing off and melons planted later will grow off better and sooner than those early planted. After you get your land ready wait until you get a rain to settle the bed, then take a hand hoe and at each cross chop a hole, throwing several seed in and covering about 1½ inches. If insects don't trouble melons in your section four sound seeds are plenty, if melons are subject to insect injury in your section plant more seed.

Cultivation. As soon as the melons come up and get tough enough to stand work take a hand hoe and hoe the ridge, breaking the crust (if any) around each plant, and continue to hoe after each rain until they get runners three feet long. As soon as your plants put out the third leaf throw the middle from them plowing deep and leave them on an eight inch ridge. Let them stand a day or so and then run around them with a small sweep, then throw a light furrow to them with a turn plow. In about four to six days they will be bunching, thin out to *one plant* (and only one). On one side of the row put 50 pounds of nitrate soda to the acre which should be put on the earth thrown up by the turn plow, then run the sweep around them, running in the furrow made by the turn plow. This covers as well as mixes the soda in the earth. With your turn plow throw out another furrow in four to six days on the unfertilized side, put same amount of soda, use sweep as before, followed by turn plow, four to six days on opposite side apply 50 pounds soda as before and plow the middles out deep with turn plow. In four to six days your melon vines should be about two feet long. Do not disturb the vines in any way but sow peas broadcast in the land for a space of five feet and cover with a sweep or harrow and your melons should then be left to themselves until ripe.

Caution. Do not work your melons while dew is on them, as it will cause them to rust.

Do not put cotton seed meal or nitrate of soda in any quantity over the plants or it will kill them, but sow on soda very thin from one end of the row to the other.

Never plant in hills when using stable manure, as the feeders are as long as the vines and should never be cut.

Always thin to one plant if you want large melons.

Never plant in hills when using stable manure, as four times out of five you will fire your vines at the root.

If you are only planting a few hills for pleasure you may dig holes three or even four feet deep putting stable manure deep, adding from one peck to one bushel corn cobs well soaked in water to hold and

gather moisture for the growing plants which should give you tremendous melons. Be sure to put back only good rich soil.

A SUBSCRIBER.
Kershaw Co., S. C.

In sending us this communication the writer says that the cost of raising an acre of melons as he advises will be about \$20.00 including rent of land. You can safely count on 800 hills each producing at least melons of the net value of $12\frac{1}{2}$ cents, or \$100 per acre for the whole crop. *Not a bad investment.*
—Ed.

BUD VARIATION—THE GREAT IMPORTANCE OF THE SUBJECT.

Editor Southern Planter:

One of the most important subjects now being discussed in fruit and farm papers is bud variation. It is a question in which every man who grows fruit; yea even every man who eats fruit is interested.

But is it true? Is there such a thing as bud variation? Some of the wise men say yea, and some nay, both vehemently, if not peppery. First, I will endeavor to explain what bud variation means, and in what way belief and disbelief in it may affect the quality of every apple, peach, pear, plum, cherry, berry, etc., that we eat. Bud variation means that in every fruit bud that a tree or plant produces, there is a tendency to vary from every other bud of that tree or plant, and to vary in a still greater degree from every fruit bud produced by every other tree or plant of that variety.

Now the lay reader must not get bud variation confused with seed variation. No one disputes seed variation, especially in fruit. In fact, nearly all new varieties of fruit are originated that way. Plant seed from fruit grown on the same apple, peach, plum or other orchard tree or berry plant or even from the same individual fruit, if it contains more than one seed, and the result will be a tree or plant, whose fruit will vary in greater or less degree, not only from the parent fruit, but also from each other. It is by fruiting and selecting the best trees or plants originated in this way, the new and improved varieties are obtained. It takes time and patience and special aptitude to accomplish much in the propagation of new varieties, and comparatively few people attempt it, and a still fewer succeed.

Most propagators or nurserymen are content to propagate varieties already originated, and whose value has been well and widely tested. This mode of propagating is done by planting buds. Buds are

planted in various ways. With strawberry, dewberry, raspberry plants, etc., the runners are planted or allowed to take root and form young plants. With the apple, pear, etc., a scion or small twig is planted. A few varieties of fruit have such vigor of tree that a mere cutting thrust into the ground will take root and grow into a tree. However, with most, it is necessary to graft the scion on a section of root of the same kind of fruit, though not necessarily of the same variety. With plums, cherries, etc., a single bud is deftly placed in a slit in the bark of a small tree of the same kind of fruit. All other buds are then cut off, and the one inserted, allowed to grow and make the tree. The small trees or seedlings on which the budding is done are obtained by planting seed.

It is necessary for a clear understanding of the subject that we keep in mind the distinction between the two modes of propagating fruit trees or plants. Of course, the same distinction exists in propagating trees and plants other than fruit bearing ones, but that does not now concern us. The two distinct modes are planting seeds and propagation by plant buds. By buds, I mean scions, twigs, runners, etc. To repeat, seed variation is so evident that nobody disputes it. Therefore we will not discuss it. I have dwelt on it at some length so as to make the distinction clear to the lay reader, that is persons other than regular fruit propagators.

All controversy is about bud variation. Many experienced fruit growers deny there is such a thing as bud variation. The lamest of causes have sometimes the doughtiest of champions, and I am thoroughly convinced that those who deny the fact of variation have the lamest of causes. I have been a close observer of fruit for more than 40 years, and a regular fruit grower myself for more than thirty years. My experience covers at least three cases exactly in point.

There are many errors which to clearly and fully state, is to refute. This erroneous denial of bud variation is, I think, one of these. Lets see. To deny bud variation is to deny that any given variety of fruit can under any influence of climate, soil, cultivation undergo permanent change. It is to deny that any variety of fruit can deteriorate or "run out" as it is termed, or at least to assert that if the variety does run out that every tree or plant of that variety in existence must keep step, must run out in exactly the same ratio. It is to assert that the fruit of every Winesap apple tree, of every Scuppernon grape vine, of every Wilson's Albany strawberry plant in the world is identical in size, color, form and flavor, or rather that they would if grown on the same soil and

under the same condition at once revert to the same size, color, form and flavor.

This is preposterous. Every observer of fruit knows that even in the same neighborhood and under exactly the same conditions of soil, climate, etc., that there is variation in the appearance and quality of almost every variety of fruit. Of course, the older the variety the greater the variation. This is because there has been more time for variation to act.

Change, variation is the fundamental law of nature. I cannot see how intelligent men can dispute that change, variation extends to fruit buds and admit that it extends to fruit seed. Of course, this variation is more potent in the seed than in the bud. It is more potent in the seed because that mode of propagation is comparatively new and has not yet attained the stability that bud propagation has. All life, both vegetable, and animal in its lowest forms, propagates by division, which is near akin to propagating by buds or runners, hence this mode of propagation, being vastly older than that by seed, is comparatively stable, though not entirely so.

Seeds and buds are both the product of the same sap, the same nutriment, and both contain ineradicably the potentiality of variation, of change, of evolution. Neither can escape this great natural law without which there would have been neither tree, nor plant, nor living being to eat the fruit thereof.

Bud variation may be, and in fact, I am convinced, is less potent than it is held to be by its extreme advocates. But to deny it in toto is to fly squarely in the face of all science. And to admit it to be true in the slightest degree, or under any conditions, is to admit that under favorable conditions it may be considerable or even very great.

But enough of theorizing. I will give my experience as to the variation during the past forty years, of three well-known fruits. There are the Winesap apple, the Scuppernong grape vine and the Wilson's Albany strawberry. Forty years ago the Winesap apples grown in this neighborhood were comparatively uniform in size and color. Since then a great many trees of this variety have been brought in and planted from widely separated nurseries in different parts of the United States. The result has been a wide variation in the size and color of the fruit. Probably this variation has extended to the flavor and also to the shape of the apple. But of this, I am not sure. I am only stating what I know to be positively true.

Then as to the Scuppernong grape. A very few, if any Scuppernong grape vines have ever been brought into this neighborhood. It is fairly certain that nearly, if not all, of the many vines now fruiting

here originated from a few old vines growing in the neighborhood time out of mind, many of them certainly a century old. Still there is a variation in the size, quality and time of ripening of the fruit of different vines which is most striking. Some bear fruit fully twice as large as others, and that when growing side by side. Some have thick hulls and some thin. Some ripen at the beginning of September and some not till the last of October. Now it is barely possible that the most dissimilar vines may be seedlings. But, this is extremely improbable, as according to my experience, when the Scuppernong seed is planted, it reverts to the black grape, similar to the muscadine or bullace, the wild parent of the Scuppernong. But even admitting that the widest variation is the result of vines grown from seed, there is still such a wide variation in the fruit of vines, known to be grown from cuttings that it fully establishes the case in point.

My experience with the Wilsons Albany strawberry is still more conclusive. It amounts to absolute demonstration. Thirty-five years ago the Wilsons Albany was the standard strawberry of this place as indeed it was of most of the country. It was a magnificent berry, large and productive, having but one defect. This defect was a tendency at the very last of the season to run small in size. About twenty years ago this tendency became so marked as to considerably impair the value of the fruit. Being loath to give up this fine old variety, I set about to see if a strain of it could be found some where free from this growing defect. To this end, I obtained plants from several different states, and set them side by side with plants propagated here for fifteen or twenty years. As the plants grew off they were closely observed. All were clearly Wilsons Albany. In plant growth and in bloom, they were identical. They were also identical in berry at the start. But this identity did not hold. The tendency to dwindle in size was much more marked in some strains than in others. I found that the berries on the home strains of plants kept their size longer than any lot under test. They retained a good size for full ten days before beginning to run small. Some of the lots or strains of plants began to run small at the second or third picking. Some held out longer, and then ran down to buck shot size. To repeat this variation in the tendency to run small, was so marked that it amounted to the clearest and most unmistakable proof that a marked variation had arisen in the different strains of these strawberry plants.

Now as to the practical bearing of bud variation. If established as true, it shows the necessity of propa-

gating fruit trees and plants of all varieties from the very best parent trees or plants to be obtained. It shows that fruit trees grown from scions obtained from a tree noted for the quantity and excellence of its fruit are superior to those grown from inferior trees. And, of course, the better the tree from which the scions are obtained, the better the fruit may be expected to be. In this way, can the fact of bud variation be made to improve the quality of every known variety of fruit.

O. W. BLACKNALL.

Vance county, N. C.

WATERMELON CULTURE.

Editor Southern Planter:

The ground selected should be of a sandy nature, and naturally land lying close to a stream is best suited to their growth. Make the hills about two feet in diameter and two inches higher than the surrounding ground. They should be at least eight feet apart; some growers say ten and others twelve; the farther the better. Hog manure is best suited to watermelons, although well-rotted stable manure will do. After the manure has been thoroughly mixed with the soil take one-half pound of a "complete fertilizer," consisting of 3 per cent. of ammonia, 5 per cent. of muriate of potash, 8 per cent. of phosphoric acid and mix it in the top of the hill. After the seeds come up their growth can be quickened by applying half a teaspoonful of nitrate of soda after each working. Here we plant the seed for early melons about the first of May, although in some places they can be planted sooner. The seed should be covered with about an inch of soil. Put plenty in the hill; fifteen or twenty is not too many, and after they come up the weaker ones can be pulled up, leaving two or three plants to the hill. Often a serious drawback to the young plants is the striped bug. In fact I have known whole crops to be destroyed by them. There are various ways suggested for preventing or destroying these bugs, among which I might mention the most common method of picking by hand and applying tobacco dust while the dew is on in the morning. Some growers recommend fumigating with bisulphide of carbon, but this method is tedious and expensive. The way with which I have met the greatest success is to make a little box about six inches deep and twelve inches square and nail a piece of cheese cloth or thin cotton over the top. Place this box over the hill when the seed begin to come up. The box can be removed for cultivating and can be left off entirely after the young plants have put out their third leaf, for then the danger from bugs

is past. The melons should be cultivated until they begin to run, after which they should be left alone.

I have tested many varieties of watermelons. Harris's Early is undoubtedly the earliest, but they are of poor quality. The old-fashioned Jackson, in my opinion, is the best suited for home use—medium early, productive and the sweetest of all. With a little care and work the watermelon patch can be made very profitable.

R. H. B.

Rockingham Co., Va.

HEIFER VS. STEER BEEF.

Editor Southern Planter:

I read with much interest the articles from your correspondents, and, in fact, everything from cover to cover of your most helpful paper, and was especially interested in Prof. A. M. Soule's article in the March number on Feeding Investigations at the Virginia Experiment Station, and think, as he does, that this work should have the support of every farmer in Virginia.

In regard to the part, "Steer vs. Heifer Beef," would say that the only reason that the steer has the preference in this section is, as in many other things, the buyers have found they can put up this talk, making the seller believe it, thereby obtaining the best for the least money. It has been my privilege and pleasure to eat "steaks" at Billy Boyles, in Chicago, and other places of like fame in this particular, where they claim they have been on ice for from six weeks to six months, but I never knew what good "steak" was until spending a season with Miller & Lux Company, of Mexico, Texas, California, Idaho, Oregon, and, in fact, everywhere, as it is said they turn off more beef than any other concern during a season. While with this company I made a drive of 425 miles, in company with thirteen other cowboys. We started with 1,000 head, and when ever the meat got low in our cook wagon the boss would tell us to kill something, and I noticed that every time the boys picked a two or three-year old heifer, after eating which I knew well enough why they did it, and I know, too, that if a buyer should go to Miller & Lux or any other large cattle raiser in the West and tell them the heifers were not as good beef as the steer, that they would be told to "go back to the States" and learn their A. B. C.'s in beefology. They are nearly all brought to a perfect condition on the range in the West, but if so on the range, why can't they be made equally as good as the steer by stall feeding?

Charles City Co., Va.

M. M. STODDARD.

Mention the **PLANTER** to your friends.

Live Stock and Dairy.

PREVENTION OF LOSSES IN SHEEP FROM PARASITES.

Editor Southern Planter:

We sheep raisers of Virginia have our troubles, as others, and I suppose we are willing to take our share of misfortune, if it must come. It seems to me that we have had just enough experience from sheep parasites to test the patience of the most faithful. Many men who have raised the very finest lambs in the past have either quit the business or cut their flocks down to just a handful. They were not willing to let the golden hoof leave the farm entirely, but they have gotten sick and tired of harsh fleeced, poor, ragged lambs. I wish I could travel through the State enough to get the information I want. I venture the assertion, however, that the number of sheep raised on the older and better farms in the State has been cut 20 per cent. during the last five years. I do not mean to say that Virginia has less sheep, for new flocks are being established in every county every year and lands that have never been grazed are being used for sheep. These new flocks are the ones that are giving most success. Well might men everywhere turn to sheep. The prices for lambs and wool are enough to make sheep men happy and make those who have not sheep green with envy. Truly this has been a great year for us. The demand for purebred rams has increased wonderfully during the two years just past and bright days are opening up for the Virginia sheep breeders. Men, keep at it. You can't find a more profitable and more interesting business. Get your boys started in the sheep business by giving them a few sheep and handling them on the shares for them. You will teach them business methods and you will put them in as straight a path to independence, industry and integrity as you can find. (By the way, sheep men seem to be a pretty honest set. I think there is something about the business that does not suit men of questionable character and tricky habits. I can offer a bit of valuable testimony to this. In twelve years I have traded with men in ten States and have trusted them over and over again, taking them at their word. In all this time I have found but one man that went back on his word. I won't say what State he was from. I am ashamed to. I was glad to learn that he was a dismal failure at the sheep business and he does not enjoy a very enviable reputation in his community. I am glad he failed in the sheep busi-

ness, for we never want dishonest men in this business.)

I was saying that farmers in Virginia are turning with great enthusiasm to sheep raising, especially lamb raising. I am sure that many who have been discouraged and quit want to take it up again and I want to do what I can to encourage it. I have been right along with the rest of them through the hardships and losses, but I am glad that I stuck to my sheep.

The cause of most of the losses and most of the failures is parasites, and we may as well admit that there are plenty of them in Virginia on the older farms and they have been spread all over the State in diseased flocks.

I have seen old worn out sheep shipped from West Virginia that showed the ravages of all sorts of parasites. I am sure I have seen ewes so badly affected with knotty guts that they would never get half through the coming winter and they went to spread the eggs of the worms that cause this trouble on land that probably never harbored so distinguished a creature as the *Oesophagostoma Columbianum*.

Sheep parasites are legion and I have been able myself to distinguish six kinds in the alimentary canal of sheep examined. There is much to be learned about them all and no one can say definitely how even so familiar a worm as the stomach worm (*Strongylus contortus*) is propagated. For this matter, who knows certainly about the life cycle of the common gape worm in the chicken, which is very similar? This has been studied for a hundred years.

There are a few things some of us have learned about the more common parasites and it would be of service to some who have not studied the subject so closely to offer a few helpful suggestions.

From my experience I am sure that the month of May is the month when the stomach worm gets its start in the lambs. So some advice along this line is very much needed just now. The ewes that you have wintered have probably retained large numbers of these parasites and their breeding season comes just about the time that grass comes. The eggs and small worms are cast off in the voidings of the ewes and the lambs rapidly pick them up from the grass. I have once before advised the dosing of the whole ewe flock with gasoline when you turn out to pasture and I believe it will save you much trouble, if you have had heavy losses from stomach worms or

have had lambs that would not fatten, for two or three years. This is fighting parasites that are already in the sheep to prevent their multiplying and if possible to keep them from the lambs. There are two ways of fighting a germ disease. In a certain sense these diseases of sheep are like germ diseases. One is to apply remedies to destroy the germ. The other is to prevent the infection.

The former oftentimes must be resorted to, but I am more and more inclined to the latter as the practical and sure method of meeting this problem that faces us. I was brought to this conclusion from my observations in England last summer. There sheep have been handled on the same lands for centuries and I am willing to testify that with the exception of foot rot in certain wet districts, and of the so-called "struck" disease in a part of Kent, (This last named disease has recently been shown to be due to the same germ that causes black leg in cattle and is susceptible to the same treatment) the flocks were remarkable for their health. These flocks were often large, numbering over one thousand, and were pasturing on farms so small that to mention their size would lead you to think I was given to telling fish stories. I at once asked about parasites, for I knew that so many sheep kept on much larger farms in our country would be badly diseased in five years. I asked the shepherds if they had heard of stomach worms. No. I asked them if they had heard of *Strongylus contortus*. They would look at me to see if I really meant to talk sense and then hurriedly assure me that their sheep had never known such afflictions. They knew nothing of "knotty guts." These questions were really useless, for I could tell by looking at the smooth, soft fleeces and the pink skins that these parasites were not gnawing at their vitals. I talked to the owners about it and they were well versed on the subject. They knew that such things existed in England and could report flocks that had been handled ignorantly and carelessly that had suffered great losses from the self-same troubles. They described the diseases so accurately that I am sure they were not misinforming me. I had the privilege of hearing the veterinary surgeon and bacteriologist from the Agricultural College at Glasgow lecture on parasites and he described all our common parasites as common in England. The parasites are there, and if the flocks are handled carelessly they get in their dreaded work. The next question was, how can a large flock be handled on a small farm so that it can be kept healthy? I have told the plan in the SOUTHERN PLANTER already, but will briefly recall the essential features for the purpose in hand.

The farms are divided into a number of small fields by hurdles. The lambs are put in a lot with the freshest pasture and after three or four days are moved to the next adjoining lot. The ewes are a few lots behind. Thus they are shifted every few days and by the time the circuit is made, the first lots have grown up in fresh pasture again, clean and nice. The flocks are not allowed to sleep twice on the same ground.

This plan requires the constant attention of a good shepherd, which we think we cannot afford, a position I am coming to doubt more and more. At any rate, we are not going to employ a man to attend our sheep, because, in the first place, we do not have sheep enough to make it pay; in the second place, we could not get the right sort of man if we desired it.

Note that this plan has prevented the ravages of parasites in England. This is information worth having. I have undertaken to offer suggestions for preventing losses from parasites in this country.

The matter is much complicated for us by the difference in the habits of the sheep. In England the suns are not hot, most days are cloudy, so the sheep spend the day grazing and at night retire to their sleeping grounds and do very little feeding. With us the sheep must take refuge from our scorching suns, so they hunt the corners of the fences, shade trees, thickets, or any cover that will protect them. These places, always being the same for certain pastures, become pest places. The eggs and small parasites are passed out with the voidings, get in the grass or dust, and are easily transmitted as they must accumulate very rapidly. If I had the time I could cite interesting facts to substantiate this position.

If we are willing to take some trouble, I am sure we can put into effect a modified form of the English plan that will help us to prevent the multiplication of the parasites. 1. *Do not overstock your farm with sheep.* You had better pasture some cattle as well as sheep. This will make it possible to move your sheep every week. So arrange the rotation on the farm that it will be three weeks after leaving a pasture before they are brought back to it. 2. *Shut the sheep away from certain shade trees, thickets and fence corners, where they have sought shelter for years and years.* It could sometimes be done by changing the fence, or by using a few strands of wire. 3. *Construct two or three light, movable shelters, which must be kept as dark as possible.* The sheep can easily be trained to these and they will gladly seek them when the sun gets hot. I have seen sheep travel a half mile to get to a shed in hot weather. These dark shelters will save the sheep much worry

and will save many from the "grub in the head," for the gad-fly will not venture into dark shelters. These covers can be moved every day if placed on runners or on old mower wheels. The shelters may be built very low to the ground and should be ventilated at the top. You will at once ask of what material these should be constructed. I have a plan I propose to try, but it may not work. You had better let me do the experimenting. If it is a success I will report it. Meantime, keep your thinkers working on the problem and if you think of a good plan, let us know of it.

You may at once say that it is absurd to take all this trouble for a flock of ordinary ewes. Don't for one moment fall into any such error. It will pay you big, if you can by such a plan make those lambs that are just about ready to pick up stomach worms put on 20 pounds per head more. You used to raise lambs that weighed 85 pounds, but last year they only weighed 65 pounds. They will weigh less than 65 pounds this year, if you are not *up and doing*.

We have not carried out this plan in detail, but we have practically followed it for six years and our sheep are in good health, except for some catarrh. I did not find any catarrh worth mentioning in England. I wish I could get their recipes. Two shepherds told me theirs, but they were so absurd that I would not even take space to give them.

Let us take up these problems with a will and I am sure we can make old Virginia one of the greatest sheep States in the Union.

Maxwellton, W. Va.

H. B. ARBUCKLE.

In our last issue we published a description and views of a sheep rack and trough which we erroneously credited to our correspondent, H. B. Arbuckle. The rack and trough is the invention of Mr. H. H. Arbuckle, the brother of our correspondent who should have had credit for the same. We regret the mistake. We want always to "give honor where honor is due."—ED.

RULES FOR MAKING GILT EDGE BUTTER.

Editor Southern Planter:

Many letters of inquiry concerning the best methods to employ in the churning of cream and the manufacture of butter have recently been received at the Station. It thus seems advisable to present this data in the following concise form.

As in all other work experience produces the master, but there is no legitimate reason why anyone who gives the following rules careful consideration should not be able in time to manufacture a first class

article of butter. Churning is no haphazard theory. Luckily it has passed that unhappy stage, and may now be regarded in the light of an exact science; and while the rules laid down are not all hard and fast, yet the individual who follows them most thoughtfully and conscientiously, and endeavors to adapt them to his local environments, will be rewarded with the greatest measure of success.

RULES FOR CHURNING.

1. Rinse out the churn with cold water.
2. Scald thoroughly with hot water.
3. Wash out with ice water to cool.

(a) The observance of rules 1, 2 and 3 will prevent the sticking of the cream or butter to the sides of the churn.

4. It is necessary to weigh the cream, so that the proper amount of salt and coloring matter can be determined.

5. Strain the cream into the churn. This will prevent white specks in the butter. If the butter contains "white specks" it is due to:

- (a) Failure to strain the cream.
- (b) Failure to stop the churn when the butter is in the granular form.
- (c) Improper washing of the granular butter.
- (d) The attempt to churn "mixed lots" of cream of different degrees of ripeness.

6. Put in the butter color (not necessary to use color when the cows are on fresh grass pastures), from one-fourth to one ounce to 100 pounds of 30 to 35 per cent, cream, varying with the amount of cotton seed products fed.

(a) If the butter is streaked the color may not have been properly mixed with the cream before churning commenced.

(b) If the butter mottles on standing, the salt has not been thoroughly worked in and distributed through the mass.

7. Churn at from 40 to 70 degrees Fahrenheit, according to the season and the nature of the food.

(a) In our climate too low a temperature cannot be secured during the summer season. Better results will be secured at this season if 20 to 40 pounds of ice is broken up and put in the churn to aid in maintaining a low temperature.

(b) As the use of cotton seed products raises the melting point of butter considerably, the addition of a small quantity to the ration in the warm season will be good practice.

(c) When cotton seed products are fed freely during the winter season the cream should be churned at a temperature of 66 to 70 degrees F. Attempts to

churn below 66 degrees F. will result in foaming, and prolonged and inexhaustive churning.

(d) In very cold weather when an abundance of cotton seed products are fed, it may be advantageous to churn at from 70 to 80 degrees F.

(e) When the butter is "crumbly," the churning temperature is too low.

(g) Cream should be warmed by placing the can containing it in a vessel of water (the water and cream should have the same level), heating gently and stirring constantly to insure even heating and to prevent cooking on the sides of the can. Never apply steam or hot water directly to the cream.

8. Properly ripened cream contains from five to six-tenths of one per cent. of acid by Farrington's acidity test.

(a) If more or less acid is present in the cream the loss of fat will be very considerably increased.

(b) Mixed batches of cream should not be churned, and all cream should be mixed at least twelve hours previous to churning, and frequently stirred to insure even ripening, and hence exhaustive churning.

(c) Sweet cream does not churn as exhaustively as acid cream, and the resulting butter is not so palatable nor salable.

9. Start the churn slowly, 30 to 40 revolutions to the minute. Remove the air plug every few revolutions for the first five minutes and allow the gas to escape. Gradually increase the speed of the churn to 40 to 60 revolutions per minute.

10. Just when the butter breaks add a gallon of ice water in warm weather, and water at a temperature of 50 to 60 degrees F. in cold weather, to the churn, and continue until the granules are the size of wheat grains.

(a) Whenever the lid of the churn is removed it should be rinsed off with a dipperful of cold water to prevent the waste of cream and for the sake of cleanliness.

(b) Do not allow any of the particles of butter to be lost. They are worth money, and correspond to the difference between profit and loss.

11. Stop the churn and draw off the buttermilk, straining it through a "strainer dipper" to prevent the loss of small particles of butter.

12. Wash the granular butter thoroughly with ice water (in warm weather) and with water at ordinary temperature in cold weather, (50 to 70 degrees F.)

(a) The amount of water used for each washing should equal the quantity of buttermilk drawn off.

(b) Wash from one to three times, or in other words until the waste water comes away "clear."

(c) Washing is said to injure the flavor of butter

in that it removes some of the substances giving "aroma" and "palatability."

(d) If butter is properly made it requires but little washing.

(e) The washing is to remove the casein or curdy matter which readily undergoes fermentation, causing the butter to go "off flavor."

(f) If the butter is for immediate consumption very little washing will be necessary.

(g) If the butter is to be kept for any length of time, unless instantly placed in cold storage, it should be carefully washed, as fermentation commences at once in our hot climate.

(h) If cream of different degrees of ripeness is churned the butter will not all come at once and part of it will be "balled" up incorporating much casein.

i) If butter is "balled up" by over churning it will not keep well (see c above).

13. We prefer to salt the butter in the churn.

(a) Put part of the salt on and revolve the churn slowly several times, and then add the remainder as above.

(b) The butter should now be left to drain and assimilate the salt from 30 to 90 minutes.

(c) If a combined churn and worker is used it may then be worked and removed and packed or printed, as the case may be.

(d) If a separate hand worker is used it will be best to work the butter twice at an interval of twelve hours.

(e) Working should expel all the surplus water, should not be excessive, and by pressure and not by friction or else the "grain" will be injured, and the butter acquire a "smeared" and "greasy" aspect.

(f) Use from one-fourth to one-half ounce of salt per pound of butter, according to the customers' taste, and the amount of cotton seed products fed.

(g) Where cotton seed products are fed freely the butter requires longer time for the salt to penetrate, the use of more salt than ordinarily is needed to keep flavor, and more thorough working to evenly distribute the salt and prevent a mottled appearance.

(h) Cotton seed products increase the cohesion and viscosity of the fat globules, and hence the difficulty shown under g.

14. If butter is made on a small scale and is sold direct to the customer it is best to print in pound moulds and wrap it in parchment paper.

15. If in large quantities pack in large tubs as follows:

(a) Wash the tub and thoroughly rub with salt.

(b) Fill with boiling water and allow to stand several hours.

(c) Thoroughly steam and cool.

(d) Put in the parchment linings for bottom and sides after first soaking them in strong brine.

(e) Put in the butter, packing it firmly as the tub is filled, and drain off the water from time to time.

(f) Fill the tub to within one inch of the top. Smooth it off nicely and put on the top parchment circle.

(g) Invert the tub and allow any moisture present to drain away.

(h) Place the tub in the refrigerator to cool and harden the butter.

(i) If the butter is to be transported long distances a layer of wet salt should be applied to the top of the tub. It soon hardens and helps to exclude the air.

(j) Burlaps on the tubs keeps them clean and hence they are more attractive.

16. Scrub and scald the butter worker with hot water and then with cold before using and keep salt sprinkled on it when not in use. This keeps it sweet and prevents the butter sticking to it.

(a) For the same reason treat all ladles, etc., in the above manner.

17. In washing and cleansing the churn and worker follow the directions under 1 and 2, and in addition use a liberal supply of sal soda and "live steam."

18. Use only brushes about dairy utensils. Never use rags in or about the dairy.

19. It is sometimes necessary to dilute very thick cream, (and especially separator cream if it contains over 25 per cent. of butter fat) when it swells up and becomes "viscid" so that it will not "strike." For this purpose use water of a suitable temperature.

20. All water used should be strained.

21. All utensils used should be thoroughly "sterilized" with live steam both before and after using.

22. Only pure sweet well or cistern water should be used about the dairy.

23. If the butter soon turns rancid:

(a) The cream may be over-ripe.

(b) It may contain undesirable bacteria.

(c) The butter may not have been washed properly.

(d) It may result from uncleanness.

(e) The milk may have been at fault.

24. Water should be used freely and everything kept perfectly clean as on that depends the flavor and quality of the butter.

25. Salt has the following important uses:

(a) It drives the water out of the butter.

(b) It is antiseptic.

(c) It gives palatability.

FINALLY.

26. Remember that the exercise of cleanliness constitutes the first and last principle of successful butter making.

ANDREW M. SOULE.

Virginia Experiment Station.

NEW TREATMENT FOR BARRENNESS.

A valuable cow dropped a calf two years ago next month. Since that time she has been repeatedly bred not only to one bull, but to various bulls without results. What would you advise me to do with this cow?

W. NICHOLLS.

Remarks.—A new method of treatment has recently been proposed for such cases, and we hope you will experiment with it and report results to the veterinary editor. It is as follows:

Take an ordinary two-cent cake of yeast and make it into a paste with a little warm water. Allow this to remain in a moderately warm place for 12 hours, then add one pint of lukewarm freshly boiled water, mix and allow to stand for another 12 hours. Prepare this mixture 24 hours ahead of the time cow is expected to come in heat and inject it into her vagina the moment she is seen to be in heat. Breed her just when she is going out of heat.

The theory upon which the use of this mixture is based is that the usual cause of barrenness is bacteria of some sort or another, and that they give rise to an acid condition of the secretions of the generative organs which is destructive to the female ova and male spermatozoa. The yeast fungi (*Saccharomyces*) when introduced as suggested are supposed to invade every part of the cow's generative organs, destroy all bacterial life and incidentally neutralize the acid condition referred to. We understand that to Dr. Peters, of the Nebraska Experiment Station, belongs the credit of having discovered the first intimation of this method of treatment in a French medical book or journal. It is to be hoped that it will prove a success, and readers are requested to give it a trial and report results.—*Veterinary Editor, Breeders' Gazette.*

ONE MORE FOR THE "DODDIES."

In the *Breeders Gazette* of the 29th March we find the following remarks in the market review: "Stockers and Feeders. Demand for anything of quality in the stocker and feeder line is unabated. *If cattle are black and polled bidding is spirited,* well fleshed cattle of this character having sold at \$4.80 to \$5.00 this week."

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.



THE CHAMPION SHORT HORN BULL NOMINEE 131262. IMPORTED.

Roan, bred by E. Gaunt & Sons, St. Helens, Ontario, Canada. First in class and sweepstakes at leading Canadian shows of 1897 and 1898, viz.: Toronto and Hamilton. Imported to head the show and breeding herd of Browndale farm, Minneapolis, Minnesota. Only Short Horn bull in the South with an American championship record. Among the many laurels taken from the ring on the grand circuit. Nominee enjoys particularly the distinction of having won both in class and sweepstakes over the great Robbins' show and herd bull. Nominee also defeated the Sweepstakes Hereford, Sir Bredwell, sold by T. F. B. Sotham, of Missouri, to C. C. Slaughter, of Texas, for \$5,000. This Trans-Mississippi Exposition being the most important live stock exhibit that year, Nominee was declared the champion beef bull of America, any breed, for 1898.

Points of special excellence in Nominee to which we would call your attention: 1st. Robust constitution, proven by wonderful depth and breadth of chest and barrel. Has never been ailing or off feed so far as we can learn. 2nd. Thick flesh and early maturity. The shortness of his head, neck and legs is something remarkable for a body of its immense bulk. These are undisputed evidences of quick development and easy keeping properties. Bones are not large for a bull of his scale, and when properly fitted for show he was smooth as an egg. 3rd. Size, lack of which is the most common and noticeable defect of Southern cattle. No animal that sells by weight

is in danger of becoming too large if it has quality and finish. Nominee has weighed 2,700 pounds and could probably have 3,000 pounds stuffed into his mellow hide. So confident are we of his being a good one all over that we have submitted him to the inspection of judges and hundreds of stockmen at two leading fairs of Tennessee when 700 pounds under his show weight. He has always come off with the good opinion of both, and incidentally the cash. Nominee is so quiet and gentle, so well trained (comes to you when his name is called), that one can't help but like him; takes so kindly even to strangers that he makes friends wherever he goes. Nominee is Scotch of the fine old Cruickshank sort, with very slight infusion of Bates and Booth—just enough to give him style and finish about the head and quarters and to transmit deep milking properties to his heifers.

Nominee is owned by Maplehurst Stock Farm, Russellville, Tenn., W. B. Doak, proprietor.

THE CATTLE TICK PLAGUE.

A Report of Progress in its Extermination and a Continuation of the Two Articles Published in this Journal October, 1896, and January, 1897.
Editor Southern Planter:

Nearly ten years ago I was detailed by the United States Secretary of Agriculture to make an inspection of the cattle of certain counties in Virginia preparatory to re-establishing the "Southern Cattle Quarantine Line," in order to better control traffic in cattle and prevent the cattle tick plague from being disseminated in northern pastures and markets.

The line was then located along the Blue Ridge and the James river and included all the "South-side" counties save Bedford. About eight counties bordering the Chesapeake bay and its estuaries north of the James were also included. Richmond city was made an open cattle market and thirteen counties previously quarantined were exempted.

Quite a long description of conditions then existing may be found in the columns of the *SOUTHERN PLANTER* for October, 1896, and January, 1897. I also took pains to discuss therein the ticks, the plague, its distribution and control. Inasmuch as the Virginia State Experiment Station and its Board of Control have since then quite fully set forth these matters and I doubt not the *SOUTHERN PLANTER* has since contained frequent articles of the same nature from various sources it will not be necessary for me to repeat these details at this time. Let it be sufficient to state that the line was located on the presence or absence of ticks on the cattle and the advantages offered by the mountains, rivers and county lines as natural and political barriers.

There is little doubt that while cattle men favorably appreciated having an open market at Richmond they for a year or two believed that the reasons for maintaining any quarantine were fallacious. I have since learned, however, that many of the skeptical have become thoroughly convinced of the beneficial results of the line.

Among the important results of the new adjustment was the almost total suppression of the plague in Northern and Western Virginia and around Richmond. Especially at the latter place had there been an unknown disease, which I diagnosed and proved was Texas or Tick Fever, which annually claimed its victims but which ceased to cause serious loss after this time. Another was the release of seven other counties within the next four years on account of their having been disinfected of ticks. Since 1899 little in this line seems to have been done in Virginia, as judged from the quarantine map annually issued by the U. S. Department of Agriculture.

The prediction made in 1897 that if communities will set about the task, large areas of now quarantined land may be released and the cattle trade thereby improved, had been fulfilled. Another forecast made in 1896 that the quarantine line could be placed on the North Carolina State line in three years under certain conditions failed of accomplishment.

The fall of 1898 found me employed at the North Carolina College of Agriculture and Mechanic Arts at Raleigh, and the next year at the North Carolina Department of Agriculture as Veterinarian.

The North Carolina Legislature first enacted in the session of 1899 suitable laws directing the State Board of Agriculture to control traffic in cattle and cooperate with the U. S. Department in its quaran-

tine regulations. Unlike the State of Virginia in which a majority of the counties were naturally free from cattle ticks and had large cattle interests North Carolina had at that time but fifteen mountain counties which could be released from quarantine and these from their location and traffic were continually being reinfested. At least six of them were perennially infected in several localities. The fact that cattle raising was the principal business in these counties assisted the Board of Agriculture in maintaining quarantine and exterminating the ticks. So efficiently moreover was the quarantine maintained that the cattle men of Henderson and three counties in Georgia—Rabun, Townes and Union—had disinfected their lands and cattle and been included north of the line by 1901. At this time the infection of the free counties was extremely limited and entirely under control. The quarantine was splendidly observed, being practically guarded by every farmer within the exempted area. Farmers in the foothill counties, viz.: Wilkes, Caldwell and Burke had also begun to disinfect where necessary with a view to re-establishing their lost cattle trade.

The writer having been called to his present position in the fall of 1900, Dr. Tait Butler was appointed State Veterinarian by the Department. He began his duties in the summer of 1901 and so vigorously has the work of disinfection been pushed under his guidance that he has recently issued a leaflet that is well worth the consideration of the cattle men of the entire country, from which I take the following statement:

"PROGRESS MADE IN EXTERMINATING THE FEVER TICK (*BOOPHILUS ANNULATUS*) IN NORTH CAROLINA.

Special attention is hereby called to the changes in the Cattle Quarantine Lines in North Carolina to prevent the spread of Texas or tick fever (distemper). Those interested in the cattle industry and the removal of the most serious obstacle to its development, the fever tick, will note with satisfaction the increase in the *free* or *unquarantined* area of the State.

Six entire counties, Wilkes, Caldwell, Burke, Catawba, Lincoln, Gaston and parts of two others, Surry and McDowell, have been exempted from all Federal quarantine restrictions during the past three years. This is the result of the campaign of tick extermination which has been carried on by the North Carolina Department of Agriculture, and is, it appears to me, a gratifying success. It not only demonstrates the feasibility of exterminating the fever ticks in all "stock law" sections, but the small cost at which the work has been done also proves that it is easy, practicable and profitable. Those who have given such matters consideration know that an embargo on a free exchange of the products of any industry is the most serious obstacle to its development, and it is safe to state that the present unde-

veloped condition of the Southern cattle industry is, to a very great extent, the result of the ravages of the fever tick and the attendant Federal quarantine restrictions. To reach the best markets our cattle must go north of the quarantine line, and must be slaughtered at once or go back home. The buyers know this and pay from $\frac{1}{4}$ ¢. to $\frac{3}{4}$ ¢. per pound less for them than for cattle of the same quality from north of the quarantine line.

The six counties which have been released from all Federal quarantine restrictions, because we have exterminated the fever ticks within their borders, sell about \$150,000 worth of cattle annually. If the price of these cattle was reduced only $\frac{1}{4}$ ¢. per pound it meant an annual loss of one-tenth of \$150,000, or \$15,000, which exceeds the entire amount expended in exterminating the ticks in those counties. In other words, any "stock law" county in North Carolina now under quarantine can be freed of ticks, and as a result exempted from Federal quarantine restrictions, for less money than is now lost each year solely because of the presence of the ticks."

It appears to me after careful consideration that Dr. Butler has conservatively underestimated the work done in disinfection, as the cattle are allowed to be shipped out of the State as uninfected after inspection from the new zone of counties. The disinfection of ten mountain counties, the six newly exempted counties and the partial exemption of the eight above mentioned makes a total of twenty-four counties to receive benefit from vigorous work. This area is practically equal to that of the Southside counties of Virginia.

Dr. Butler places the cost for each county at one-half the increased income under the new conditions. To have foretold the increased agricultural prosperity that will follow, the improvements in breeding and the new markets open, to breeders of fine stock is of course too problematic for him to have entered into in his leaflet, yet such results will surely follow.

The dent made in the line is but the forerunner of a much larger work that will be pushed not only in North Carolina, but in all Southern States save perhaps Florida. The dent marks progress and shows what may be done by keeping hammering at it.

Virginia began work, accomplished results for four or five years and then seems to have rested. With the accomplished deeds before her cattlemen it seems strange that the work did not continue. Such work cannot be left entirely to those who know of no other conditions. The instigation must come from the State and Federal authorities. The harm resulting from harboring the plague reacts on both. Each should endeavor to remove it. The campaign is, however, an educational one and the work must be done by cattle owners who receive the direct benefit.

If the North Carolina Department of Agriculture had merely resorted to tracts and bulletins to en-

lighten the cattlemen they would be no better off now than before; direct personal work of the department's officers with cattle clubs and individuals has been the inciting cause. The Federal Department has aided through its repeated inspections and the personal information of its inspectors as to what they were looking for and why they were looking for it. More thorough guard of the quarantine line has aided, because the severe check on the traffic led cattle drovers to other methods than "running the blockade" to sell their cattle.

For the best work the State authorities must seek the cooperation of the U. S. Secretary of Agriculture in the instruction of its people and both departments must meet the people personally in the lecture hall, at cattle club meetings and on the farm next the cattle. Methods must be devised and the cattlemen carry them out through their county organizations and the individuals.

There is no work more worthy of the Federal Department of Agriculture through its Bureau of Animal Industry than assisting the Southern States in removing the burdensome plague from its cattle and by removing it forever do away with the perpetual quarantine which will eventually cost more than the Government's share of the disinfection. There is no cause to which the Departments of Agriculture of the Southern States can more profitably turn their attention. To this end let every cattleman and every one interested in the agricultural prosperity of the South lend his aid.

COOPER CURTICE,

Prof. of Animal Husbandry R. I. College of A. & M. A. Kingston, R. I.

WOUNDS—THEIR CLASSIFICATION AND TREATMENT

(Continued.)

Punctured wounds are produced by the penetration of a sharp or blunt pointed instrument into the tissue. Their depths are usually disproportioned to the opening thus made. They are, therefore, the most dangerous of all wounds, injuring, as they frequently do, important vessels, nerves and deep-seated vital parts, with a great liability to leave foreign substances imbedded along their course, and are often followed by a long period of constant or periodic suppuration. In the treatment of such wounds, the most careful examination of the parts should be made to ascertain the extent and damage done. This should be done early or before inflammation and swelling has taken place. Having removed all foreign substances and carefully disinfected the parts, drainage must be established at the most dependent point. If the wound be in the foot, the orifice must be made sufficiently large to insure perfect drainage (a point too often overlooked in the treatment of nail pricks). The parts must be thoroughly disinfected, and if in-

flammation follows, hot poultices or fomentations applied until all soreness disappears and the process of repair be well established. The parts must be thoroughly protected and all foreign substances excluded until nature has completed the cure.

In some sections (notably along the Atlantic coast) punctured wounds in the feet are dangerously liable to be followed by tetanus, from the fact that the germ of this disease lives in the soil, hence the importance of protecting this and all wounds which are liable to come in contact with the ground.

A lacerated wound, as the term implies, is one that is torn, the skin is usually torn in several directions. No better example of this class of wound could be mentioned than those produced by barbed wire fences, the edges are usually uneven and occasionally shreds or strips of skin and underlying tissue are left hanging, giving the wound a ragged appearance. Such wounds usually heal slowly and imperfectly, and leave blemishes to mark their location. In the writer's experience lacerated wounds, especially those produced by barbed wire, are dangerously liable to erysipelas. Early in their treatment the bleeding demands attention. If the laceration is in the region of the foot, such as occurs from a horse striking his foot through a wire fence and becoming fast, a serious aspect is usually present. Not unfrequently do we find such a poor animal hung up, as it were, with the wire drawn through all the tissues and only checked in its progress by the unyielding bone, the arteries lacerated, and the animal weak from loss of blood. Those familiar with the management of horses can readily imagine such a picture. Whatever is done must be done quickly, the foot having been liberated, bleeding must be checked, and to attempt ligation of the wounded vessels means further delay. A compress above the parts readily suggests itself to the practical mind. The large artery supplying those parts runs down at the edge of the flexor tendons and is easily compressed. A piece of rope, binder twine, handkerchief, coat lining, anything, will do for the time, but to be effectual it must be drawn tight. Having stopped the blood the wound must be examined carefully for foreign substances, lacerated tissue, etc., and when all such have been removed the entire foot must be immersed in a warm, antiseptic solution to insure destruction of introduced organisms, and the entire foot be carefully wrapped in absorbent cotton and securely bandaged. The animal should be kept as still as possible and a cooling, easily digested diet administered. The dressings should not be changed for 24 hours, or until danger of bleeding is past. As soon as the wound is securely bandaged, the compress may be relaxed or entirely removed. In no case should it be left on longer than it is possible to dispense with it. Lacerated wounds in other regions require much the same general management as those of other forms: the

parts should be brought together as well as circumstances will allow, with the strictest attention to cleanliness and thorough disinfection.

Contused wounds are those where the parts are injured with the skin unbroken (contusion, a bruise). These are indicated by swellings, lameness, if in the region of the muscles, immediately concerned in locomotion, and frequently followed by an abscess. Here in Virginia the most frequent occurrence of this form of wound is found in the condition which is popularly known as Fistulous Withers and Poll Evil. This is not a disease, as is popularly supposed, but the result of injury, and that injury a contused wound. A moment's investigation will reveal the true cause of this most serious form of wound so disproportionately prevalent in this part of North America. Here in Virginia the saddle horse has been developed to a degree of perfection only equalled by her adjoining sister States. One of his prominent characteristic features is his high withers brought about by a desire on the part of his owner to produce style and carriage not otherwise obtainable; therefore how much more liable such an animal is to injure such prominent parts than one of less development. In rolling, the weight of at least half his body rests on the withers, and if the ground happens to be hard or he rolls violently on a rock, a contusion followed by an abscess is bound to be the result in exact proportion and extent to the injury done. Again, bruising from ill fitting, low framed saddles is another fruitful cause of this accident. It is just as necessary that a saddle be properly fitted as it is to have a collar the proper size and shape. The treatment of contused wounds should be prompt and specific, everything necessary to allay inflammation must be done as early as possible after the accident; cold applications, such as pounded ice, should be applied to the parts, followed by anodyne (soothing), liniments. If abscesses occur these should be freely opened at their most dependent part, all fluids washed out, and the wound kept thoroughly disinfected until healing has been complete. An abscess in the region of the poll or withers becomes troublesome from the fact that it is hard to establish and maintain proper drainage, and such cannot be healed except such drainage is perfect. It is, therefore, absolutely necessary that a free opening be made and kept open until healing has become complete in the deeper portion of the cavity. Where trouble is experienced in doing this it becomes necessary to repeat the treatments much oftener than would otherwise be required. Such wounds at best are tedious, and slow to repair, and the longer they are allowed to run without treatment the more troublesome they become, pus becomes burrowed in deep seated tissues, pipes form, when the popular term of fistula becomes applicable.

JOHN SPENCER,
Blacksburg, Va. Professor Veterinary Science.

The Poultry Yard.

TURKEY RAISING.

Editor Southern Planter:

Enquiries from some of my patrons as to the best mode of raising turkeys have induced me to write you. I wrote them I would answer through the *PLANTER*, if the editor would be kind enough to permit it. If you wish strong poults, you must have well-bred, vigorous breeders of a strain capable of transmitting its good qualities to its progeny. If you can't get all thoroughbreds, get a thoroughbred tom, as he will increase the average weight of your turkeys five pounds. Never, never get fat turkeys for breeders. The domestication of the turkey has been so recent they retain in a marked degree the secretiveness of their wild progenitors, so if you wish them to lay near the house you must provide nests in quiet places, covered with brush and supplied with leaves or straw. The eggs, if the weather is cool, should be removed at once and placed in a box lined with flannel, and be turned every second day. The setting hen needs only corn and water—never soft food. When hatching commences, the poults should be removed to a warm room till all the eggs are hatched. Then they may be placed with the hen in a coop closed at the back and ends and slatted in front, and with a yard made of 12-foot planks 15 inches wide, set on edge and nailed at the corners, enclosing a plat of ground, which should be well set in short grass. When the poults can jump this enclosure, they may be allowed to go with the hen. If the weather is clear, the hen may be turned out, as she will not leave her young. Storms must be watched for, and if the turkeys get wet they must be carried to a warm room and dried. Turkeys are very tender till their heads become red—"shooting the red," as it is termed—then they become much harder than chickens. Poults need not be fed for the first twenty-four hours. Bread, oat-meal, wheat grits, soaked in mills, are all suitable foods for young turkeys. Feed four times a day and spread the food, so they will not fill themselves too quickly. Never feed as much as they want, as more turkeys are killed by overfeeding than any other one cause. Lice is the next most common cause of death to the young turkey. When the hen is set the nest should be fresh and be well sprinkled with insect-powder. When the hen is removed from the nest, she should be well dusted with insect powder and her breast and under the wings be well greased. The hen and poults should be dusted once a week with insect powder. A large blue louse on the heads of the young turkeys is the most common. A slight greasing with

lard, with three drops of carbolic acid to a teaspoonful of lard once a week will rid them of this dangerous pest. Do not grease heavily, as much grease is dangerous to the young poult. Dusting thoroughly with a standard insect powder will keep them free from mites and the chicken louse. If your soil is infected with the gape-worm, it is best to plow deep with a turning plow a piece of land large enough for your pens, and supply green food by onion tops, lettuce and grass chopped fine.

JOHN B. BASKERVILLE, M. D.

Pulaski Co., Va.

POULTRY NOTES.

May is one of the busy and important months with the poultry man. Many people think May hatched chicks are too late to make good winter layers. My experience during many years has been that chicks hatched in May make very rapid growth and attain maturity nearly as soon as those hatched in March. Pullets hatched very early must be fed very carefully or they will begin to lay in August and if they do they will be sure to moult in October and November, and they will not lay equal to yearling hens. We have about 100 of this kind now and I fear for Thanksgiving eggs we will be obliged to look to our May hatched chicks.

During this month the laying stock must have extra care if good fertile eggs are wanted. Do not feed mash of any kind if the hens have a good range on grass. Be careful to feed meat sparingly. They get a good supply on the range and too much meat may cause diarrhoea and this always means few and infertile eggs. Feed good dry clean oats, corn and wheat in the litter and keep dry wheat bran where the fowls can get all they want. See that the grit and oyster shell box does not get empty. Keep them free from lice and their roosts free from mites. If all the males are thoroughly dusted every week with some good lice powder very little trouble will come from the few lice that will be found on the hens. Sitting hens and those having broods of chicks should be dusted regularly once each week. An excellent way to keep a flock free from lice is to make a shallow box two feet wide and six or eight feet long and fill it with dry loam and once every week mix half a pound of good lice powder into the loam. Dry loamy earth is much better than sand or ashes. The hen louse breathes through holes on the sides of its body and fine particles of dust fill these pores and choke the louse. Sand will not do this. Ashes spoil

the plumage and discolor the skin on the legs and feet. If a hen mopes around, does not eat, has a dark or pale comb, place her in a cool shady place away from the flock and give her about one-half grain of quinine and a pinch of ginger. If she does not recover in 24 hours cut her head off and burn her and everything she has come in contact with and disinfect the house where she roosted.

The care of the chicks is especially critical this month. Brooder chicks must have good attention. Warmth is very essential to them. They must be warm and dry. On very warm days they must have shade and no heat, but if the nights are cool and damp they must have some heat or they will crowd, "pile up" as we say, and sweat, then get chilled and their feathers will droop, they will be listless, have bowel trouble and soon take their harp and wings to lands unseen. If there is anything in this world that shows all the "misery of the flesh" it's a chick that has wings about four sizes too big and tries to draw itself into a weaver's knot and stands and sleeps in that absent-minded way that reminds one of the sleep of the "Weary Willy" after he has imbibed too freely of bad whiskey and free soup.

Richmond, Va., R. 6.

CAL HUSSELMAN.

CHOLERA.

Editor Southern Planter:

Some one asks about chicken cholera, a cure, etc., You say, "None for sure—Prevention first." Right about the latter, but listen: "Blair's Chloral Thymol Prophylactic," made by J. Blair, 9th and Broad streets, Richmond, Va., has cured and stopped it for us for years. One teaspoonful in a pint of drinking water, and meal mixed with it to eat, have cured turkeys and hens when they were senseless, feathers ruffled up towards head, wings outstretched and bills drumming into the earth. Pick their heads up and pour "the Blair's" down and in an hour repeat and keep doing it, giving them meal along with it. Also know of 17 hogs of Mr. Brady's, of Howardsville, Va.—three were dead of cholera, others sick, when he was told of Chloral Thymol, gave it to them, sick and well, cured sick and all. It is a powerful germicide and disinfectant and Dr. Hunter McGuire often begged the late Mr. Hugh Blair of the firm, who first got it up, to advertise it, that it would make him a fortune, etc, but Mr. Blair being of the "old school druggists," as well as "Virginia gentlemen," considered an advertiser in medicine as a "quack and humbug." Mr. Brady was told of the cholera cure by my cousin, A. S. Blair, also of Howardsville, nephew of Hugh Blair. Now, if you think you can

help any poor brother farmer with the cure you are welcome to put it in shape.

T. W. HEWITT.

Charles City Co., Va.

POULTRY QUERIES.

INCUBATORS AND BROODERS—EGGS OR BROILERS—HEN HOUSE.

1. What kinds of incubators and brooders does Mr. Husseلمان use and is it necessary to have a close room for incubators?

2. Which is more profitable, keeping hens for eggs or raising broilers for market, or could one more successfully combine the two?

3. Is the large house, 10x100 feet, mentioned in February PLANTER divided into apartments or is it all one room? What are best kinds of roosts and how high from ground?

4. Which of the smaller breeds for egg production would he advise? And which of the larger breeds for broilers?

M. E. BROWN.

1. Any of the first-class incubators will do good work if instructions are followed. I do not advise anyone to buy the cheap incubators advertised. Under favorable conditions they will make satisfactory hatches occasionally. An incubator must be well made, of good material and must regulate the temperature under all conditions, have good ventilation and have some way by which moisture can be supplied if necessary.

I use home-made brooders with top heat and ample ventilation. I have one three sectional pipe brooder but do not find it as satisfactory as the ones I build. I do not advise outdoor brooders for any place or climate. Do not put more than 50 chicks in any brooder. All incubators must be placed in a well ventilated, cool, quiet room. Keep sunshine and drafts of air out.

2. Keeping hens for eggs if the right kind are kept. Raise your pullets and in doing this you will have fully 40 per cent. cockerels which must be sold for broilers. These will sell for enough to pay for their feed and feed enough to mature the pullets. Growing broilers exclusively is a business that requires special skill and expensive equipment.

3. No. It has roosts 3½ feet wide along north side with dropping board 10 inches below roost poles. This floor is 3 feet from gravel floor of house, thus giving all the floor space for scratching material, etc. Nests, four in a cluster, are placed along south side two feet from ground. No partitions in the house.

4. Leghorns for eggs? I prefer the S. C. B. White Plymouth Rocks or White Wyandottes for broilers. I prefer the latter. They plump up better and have a better breast.

CAL HUSSELMAN.

The Horse.

WHY FARMERS SHOULD RAISE DRAFT HORSES.

First, the improved methods of farming, the use of the sulky and gang plows, riding harrows, corn plows, etc., calls for good draft horses to do this heavy work.

While every farmer should raise his own horses to do the farm work he should also raise a few to sell every year. And it seems to me the kind of horse best suited for his use on the farm would be the kind to raise for the market. For this reason: Supposing you have a good draft horse or mare blemished by wire cuts in some way, which would hurt them in selling to the buyers. They can be kept on the farm and earn their feed, and the mare can produce colts; and a good draft horse brings the highest price on the market.

Some of the largest business firms in Chicago and New York buy the best draft horses to use on their heavy wagons as advertisements to their business.

One of our local horse buyers took me to his barn and showed me a draft horse which he had been trying all last summer to buy of a farmer in this county. He succeeded in buying the horse by paying a good price. He was a horse of about 1,600 pounds, a true type of Percheron. A fine head, broad back, good shoulders, a nice arched neck, heavy bone. He remarked that he would pay almost any price if he could buy such horses but he can't find them.

I inquired about the breeding of the horse and he said, the sire is a good registered Percheron, and the dam a three-fourths Percheron mare of 1,900 pounds weight. I think while we should try to grow the best kind of corn and other crops, and increase the yield per acre, we should also breed our stock of horses, cattle, sheep, hogs and poultry to the highest type, in no kind of stock will we be better repaid than in breeding our draft horses as near the true type as possible.

Now, the question comes to us, *How can we do this?* Simply by breeding with a purpose or a fixed type of a horse in view.

I think we could make no better investment on our farms than to buy a pure bred draft mare or a team of mares. They will earn their feed doing the heavy farm work I speak of, and raise good colts besides that will bring the highest market price.

The high prices that pure bred draft horses are bringing at the recent pure bred sales indicates to me that farmers are improving their horses all over the country, which is only in line with all improved methods of farming and stock raising.

Some one will say: Can a farmer afford to pay from \$200 to \$400 for a registered draft mare? Yes. I will just mention here a farmer that I know in Clinton county, Iowa, who owned a Percheron mare. When I saw her a year ago she was 12 years old, and

sold for \$410. This same mare is the dam of eight colts that sold for \$4,250. I was at his sale and saw seven of them sold for \$2,750. He had sold one before privately for \$1,500.

Two years ago, another farmer only thirty miles from here sold four Percheron mares for \$1,415. Two of these I succeeded in getting. These mares have done the farm work and raised four colts in two years.

While I do not expect to do as well as the parties mentioned, I consider it the best investment I ever made.—*Live Stock Journal.*

NOTES.

The scene at Woodlawn, the stock and dairy farm of A. T. Broadus, near Old Church, Hanover county, is a busy one these fine spring days. Near two thousand acres are included within the boundaries of this well kept Virginia estate, and many cattle and horses graze on the rich pastures of the low lands. Wyalusing, full brother to the great race horse Potomac, headed the stud for several years and quite a number of the get of this thoroughbred son of St. Blaise and Susquehanna are owned on the place. The brood mare band numbers a dozen head and in the selection of these matrons special attention was given to size and individuality. The get of Wyalusing from them have found ready sale as the cross has been productive of both clever harness horses and cross country performers. A pair of these horses, both four year old black geldings, were recently sold to Mr. James A. Moneure, of Richmond, for use as a coach team, while another of them, a chestnut gelding, 4, is in the stable of Harry C. Beattie at Bloomington Farm, who will school him over the jumps. A recent addition to the stud is the trotting sire Sir Red, who will now rule as premier sire. Sir Red is a trotter and bred in choice lines. He is a brown horse, 15.2, weighing 1,100 pounds, and his appearance is decidedly impressive. He was sired by Red Wilkes, dam the great brood mare Hamite, by Hamlet, an elegant son of Volunteer, 55.

One of the handsomest thoroughbred stallions in Virginia is the bay horse Knight of the Garter, who rules as premier sire at W. W. Sanford's Woodley Farm, Madison Run, Orange county, Va. He was a fine race horse and is richly bred, being by Knight of Ellerslie, a great race horse and successful sire; dam Dearest, by imp. Glenelg. It may be of interest to state that Knight of Ellerslie is a son of Eolus and Thomasia, by Scatlock, second dam the famous War Song, dam of Eole, St. Saviour, Eon, by War Dance. Knight of the Garter will be used principally as a sire of hunters and jumpers, and should be a pronounced success. BROAD ROCK.

Questions and Answers.

BARN BUILDING—SILO—WATER SUPPLY.

I am proposing to build a barn on a hillside, and I have two or three points on which I would like your opinion or experience. First, I am going to build with the gable end to the hill and drive in above the square, in order that the pitching may be down instead of up. Now, while I am not yet a full convert to the silo, I have thought of making one under the driveway. My basement story will be 9 feet and the one above 13 feet, which will give 22 feet below the driveway. By digging it out 10 feet wide and dividing it into compartments of 10 feet and making it long enough to get enough earth to fill the driveway, the cost of digging will be divided with the driveway. What I want to know is which is the better, an underground silo or a round one above ground? By putting one in the barn, it can be made deeper with little expense. Another point on which I would value the opinion or experience of THE PLANTER, will be explained when I state my case. As I am situated so far from saw mills, the lumber for a barn is expensive, and while stones are plentiful, we have not a stone mason who can make a good wall. I have been thinking of building of small logs (peeled before using), and letting it stand a year before finishing, to shrink and settle, and then beginning at the bottom with an 18-inch wall; cover the logs with concrete, thus making a stone wall, with the exception of the logs imbedded in it. Now the question is, Will the shaking of the barn by the wind break the concrete from the logs? I have not much fear for the lower story, but the upper may be severely shaken at times.

Another question is, Will the barn settle and shrink enough in one year to make it advisable to fill between the logs? As the span will be 45 feet and the roof steep, I have thought that the weight would probably cause it to settle sufficiently; and as the logs will be small and peeled, I have thought they will shrink sufficiently. But I may be mistaken in both. A question as to the water supply. I think I will be able to get a supply by digging 50 or 60 feet. There are six or seven never-failing springs within 300 yards, and not over 70 feet to the lowest below my barnyard. There is also a "spring branch" running by the lowest spring sufficiently strong to supply a 10-foot overshot wheel to force the water up to the barn. I have also thought of making a cistern under the driveway, with a faucet at the bottom to run the water into the stables. But the fear that I have of that is that careless hirelings may in my absence leave the faucet open and empty the cistern in a night. On all of these points I would like to have the opinion or experience of THE PLANTER, and, if possible, in the next issue. I have had no experience with concrete, rams or cisterns, and force pumps are expensive and liable at all times to get out of order. To pump water for stock from well or cistern is laborious, and wind mills are, from what I have seen of them, more trouble than they are worth. A great objection to all machinery of that kind is that, so far as I have seen, it always gives out just as the time that you need it most.

AN OLD SUBSCRIBER.

Gulfport Co., N. C.

We doubt very much whether the plan you suggest for building the barn will be satisfactory. Instead of using the logs they not use the stone, of which you say you have plenty, by putting them into the concrete wall. A wall thus made makes a structure practically as good and as firm as though the wall was entirely of concrete. This we know will be satisfactory, as we have seen buildings erected in this way which were just as firm as though built of stone or concrete alone. We are satisfied that you can make an excellent silo under the driveway as you suggest, and think you will make a great mistake if you do not put one there. If not fully convinced of the value of the silo now, you will be after you have used it for one year and seen how economically and conveniently you can feed the stock from it.

As to the water question, we think you should also pro-

vide for the cistern in the position you suggest, and that the supply to it should be forced up from the spring by a ram worked by the stream which you say will drive a water wheel. If you put down a Rife's ram at the spring you will practically have no more trouble or cost with it for years. It will work day and night without any attention and rarely needs any repairs. Wherever a ram can be fixed, and it requires practically very little water to run one, it is the cheapest and most effective means to get water into a building. To prevent careless hands from leaving the faucet open and wasting the water in the cistern you should have a spring faucet which closes as soon as the hand is taken from it, therefore cannot be left open unless tampered with.—Epn.

SOY BEANS.

Will you please give me your opinion in regard to soja or soy beans as an improver in orchards. I have seen very much of late about cow peas as improvers, and have had some experience myself, and am very much impressed with the beneficial results, but have seen nothing in regard to soy beans. If they are what some of your correspondents claim for them, I believe they are just the thing for the orchardist, if he will plant them three feet apart in rows and cultivate as long as he can and then let them remain as a winter covering, if he should so wish. Do you think we live too far north to make a success of them. The cow pea matures all right.

M. L. HATCHER.

Bedford Co., Va.

Soy beans will succeed well in your county after the land becomes inoculated with the bacteria peculiar to the beans. Probably the first crop seeded will not make much of a growth unless the seed or land be inoculated with the bacteria, which can be had from the Experiment Station Virginia, and is also advertised in this issue by the National Nitro-Culture Company. We believe that you will find the soy bean a good crop to grow in the orchard, as you suggest. It gathers nitrogen, and will thus improve the soil and help your trees, but we doubt whether it would make so good a crop to make a winter cover on the land as cow peas, as it is more upright in its growth and does not drop down on the land in the winter. We would grow a crop for improving the orchard in the summer, following it with crimson clover as a winter cover crop.—Epn.

BROOM CORN.

Will you kindly publish in your paper or give me the information otherwise as to the culture of "broom corn"? Charlotte Co., Va.

WM. H. HAYES.

Broom corn will usually make a satisfactory crop upon any lands that will grow good corn. While its production in the United States is largely confined to the States of Illinois and Indiana, yet it can be grown wherever corn can be grown. In any section where land is apt to be wet at the time the broom is ready to be cut, it can never be made of prime quality, as the rain stains the broom and changes it from the green color which broom makers desire to a red, which prevents a good price being obtained for it. We have seen good broom corn grown in Virginia, and believe that a crop can be made here profitably. It should be planted in rows 3 to 3½ feet apart and the seed be drilled so as to leave the plants from 3 to 4 inches apart. About two quarts of seed, if of good quality, will plant an acre. The seed should be tested for germination before planting to have an even stand of plants. The cultivation of the

crop is the same as a corn crop, and it should be frequently worked until laid by. The broom is cut when the plant is in flower and before the seed develops largely. After cutting the broom should be dried rapidly by being placed on racks in a shed protected from the rain.—Ed.

SEED CORN—MELONS.

I live in the Southern part of Rockingham county, on South river. I see Locke's Prolific seed corn advertised in your paper. Is that good corn, and will it do well with me. Where should I buy my seed to get the best results, in the North or the South? I have been thinking of changing seed corn, as my fodder grows so large on my bottom land. I raise melons. Which is the best kind to plant? Name some of the best seed corn for my section. C. S. CRANE.

Rockingham Co., Va.

1. Cocke's Prolific is a fine corn and well adapted to river lowgrounds, being very productive, carrying from three to six ears on the stalk. While it was originated on the James river, and it makes its best growth in that section, yet we have known it to make a good yield on high land in other parts of the State. It is usually very tall, but its tendency to tall growth has been obviated largely in some experiments made especially at the North Carolina Experiment Station, where by careful selection of the seed taken only from the lowest ears on the stalk for several years, the height of the corn has been brought within reasonable compass. We know of no reason why it should not do well on your lowgrounds, and think it will be worth your while to try it. You can get seed from Wood & Sons, of this city.

Holt's Strawberry, Eureka, Blount's Prolific and Boon County Special are all good new varieties of corn, any one of which we think would be likely to do well in your section. They can also be had from the seedmen advertising in this issue. None of these new varieties will be likely to do their best in your section the first year of trial, as corn is very much affected in yield by local climatic conditions, and must become acclimatized before it will do its best.

2. Giant Rattlesnake, Jackson and Kolb's Gem are probably three of the best melons which can be raised.—Ed.

PHOSPHORIC ACID.

Is the phosphoric acid as available and as valuable in a phosphate containing 19 per cent. phosphoric acid and 45 per cent. lime as it is in the common South Carolina phosphate? Is the lime in the first-mentioned fertilizer as available as pure lime? If there is a difference in the value of the forms of phosphoric acid mentioned above, please give them and oblige.

M. B. QUISENBERRY.

..Louisia Co., Va.

Wherever a phosphate fertilizer has the analysis given in the form above it may be at once assumed that no portion of the phosphoric acid or lime is in an immediately available condition. It indicates that the fertilizer is in the form of a phosphate of lime like raw bone or South Carolina rock. In raw bone the phosphoric acid often amounts to 20 per cent. In South Carolina rock ground fine (floats) there is often from 25 to 28 per cent. of phosphoric acid. In both cases this phosphoric acid will be given up very slowly to a crop unless the land to which it is applied is well filled with humus (vegetable matter), and even in that case the action is slow. The lime also is in a very inert and unavailable condition. To make the phosphoric acid available the bone or rock must have sulphuric acid mixed with it in nearly equal quantity by weight. The phosphoric acid is then set free and made immediately available,

but the percentage of this free acid rarely exceeds 14 to 15 per cent. in the rock phosphate. The lime also is by this treatment made available, and appears as sulphate of lime (land plaster) in the fertilizer. Immediately unavailable phosphoric acid is usually valued at from 1 to 2 cents per pound, whilst available phosphoric acid is worth 4 cents per pound.—Ed.

GUM SPRINGS LAND (LOUISIA CO., VA.)—HOW TO IMPROVE SAME.

May I impose on your good nature long enough to ask your advice, which I value highly, about a class of land and its treatment, which for a long time has baffled my efforts at improvement of a permanent kind? I live in what is called the "Gum Springs" section of Louisa county, Va., and the land I am asking about is called "Gum Springs Slash." It is a grayish, dark soil, and generally is underlain by a crust, so to speak, of a rusty iron appearance, and very hard, and will grind off a chilled plow point in an hours work. Upon breaking through this crust you come to a clay subsoil of the fuller's earth variety, which is very nearly impervious to water; but is not entirely so. The crust, I believe, is entirely so. Subsoiling seems to do some good, but the crust seems to run together again after a while. I have a farm of 180 acres, and about one-third of this is "slash." I would like to know the best method to improve it. This land, with seasons to suit, and while in an improved condition, say from a good manuring or the application of some suitable guano, will produce good crops of small grain, if bedded high, and for a year or so will produce good crops of timothy, but will soon lose its fertility. It is not corn land at all. Under best conditions it does not produce good corn, as the roots seem to strike the crust and stop. This land keeps so wet that it is always late in the spring before we can get at it, and we have to stop cultivating it early in the fall. I have some now that was in corn last year and is now in the stubble. I should be glad if you would advise me as to the best way to utilize it and at the same time improve it. I thought of putting it in oats this spring and following then with peas, to be plowed again in the fall and sowed in wheat and grass. Herds grass or Red Top I expect is the only grass that will stand there permanently. I would be glad if you would write me your ideas, as I would like to go after the land the first dry spell. My means are limited, and this is my reason for asking for a course that will improve the land and at the same time pay the expenses, or part of them.

Louisa Co., Va.

FRANK C. MORRIS.

From what you say, I would suppose that the chief need of that land is a thorough underdraining with tile, and then the use of lime in addition to good subsoiling. Subsoiling is of little use in land of this character unless it is first underdrained. If the tile are too expensive, you may make fairly good drains with pine poles laid two side by side, with a space between, and a third one laid on top, and then pine straw cover before putting in the earth. But for permanent effect the tiles are better. The land is doubtless acid, and is of a character needing in the fertilizer a due percentage of the mineral matters of phosphoric acid and potash. You might, as you propose, sow oats in high beds for drainage, and follow these with peas, giving the peas a good dressing of acid phosphate and muriate of potash, and let the peas die on the land, and in the spring following give a coat of 30 bushels of freshly water-slaked lime per acre, and then plant corn on beds, and I think that you may get a fairly good corn crop by keeping the water furrows open. Then follow the corn with wheat and dress the wheat with the same fertilizer. For the red clay uplands of Louisa I have never advised the use of potash to any extent, but it will be found very useful on the slash lands. But that land will never reach its best till underdrained. Put the lime on top after preparing for corn.—W. F. MASSEY.

ACID PHOSPHATE—SOILING CATTLE.

I would like to ask you in regard to one thing you advocate in acid phosphate. I have always understood and believed a heavy application of it would sour the land. If that is so, then why do you recommend it to the extent you do. The farm I have under charge has been dosed with it for years and has gone down, with bad plowing and general good natured farming, until it is poor indeed. I mean by good natured farming lack to fight briars, undergrowth and all encroachment of obnoxious growth, the fence rows not cleaned up, etc. The land has lost all life, is dead, with no grass, only "wire grass" and crab grass. Still I had a good field of red clover from a wheat field. I have always been afraid of acid phosphate, for fear of souring the land. Any information you can give me regarding the same I will be thankful for.

2. I have tried the soiling system last year, and shall continue it exclusively this year for all stock. Am I right? To figure out a balanced ration is mystifying to me. I shall scan the SOUTHERN PLANTER in the future with the same zest as I have for the last four years. I thank you for one of the best papers issued for the farm. H. J. BUHRMAN.
St. Mary Co., Md.

1. We have never taken any stock whatever in the idea that the use of acid phosphate will sour the land. It is true one-half or nearly one-half of the acid phosphate is made up of sulphuric acid. Immediately the acid is poured upon the phosphate rock it sets free the phosphoric acid, or a large part of it. The acid itself combines with the lime and forms sulphate of lime, which is the same as land plaster, and in this condition becomes absolutely inert for the formation of a sour condition of the soil. Sulphate of lime, like carbonate of lime (the ordinary form in which lime is applied to the land) corrects the acidity in the soil, though the sulphate is not so effective in this respect as the carbonate. If in making the acid phosphate an excess of sulphuric acid is used (which is not very likely to occur, as it will cost the fertilizer makers too much to waste the acid in this way), any free acid in the acid phosphate would immediately, when the phosphate was applied to the soil seize upon some other base in the soil and thus become as inert for harm to the soil as it is when combined with the lime as the sulphate of lime; therefore you need not be afraid to use acid phosphate. It is the cheapest and most available form in which phosphoric acid can be obtained, and this is the reason why we so persistently recommend its use where phosphoric acid is needed. What your land needs is lime and vegetable matter. This will put life into it.

2. We think you are right in adopting the soiling system of feeding. We have practiced it ourselves, and know it is economical in the consumption of food and gives satisfactory returns in the pail. The one trouble is getting labor cheap and effective enough to do the work. You can carry twice as much stock on the same area of land, and this will usually pay handsomely for the extra labor which has to be employed. We will deal with the question of balanced rations for stock some time in the summer when we have more space at our disposal.—Ed.

WORKED DOWN LAND, ETC.

I own a piece of land in Essex county which I desire to make a farm. About twenty-five years ago it was in a high state of cultivation, and produced good crops. Being worked down, it will now average about ten bushels of corn to the acre. A hard pan underlies nearly every foot of it, and, of course, it should be subsoiled.

It ranges in texture from medium to stiff, and lies along a creek. I have tenants on it, who work according to my directions. I furnish land, seed and fertilizers, and we di-

vide in half. We are compelled to make as large a corn crop as possible, and therefore will have to use fertilizer on the first crop until we can get a rotation established. My intention is to use lime, acid phosphate, clover and peas very extensively, but for this year a large acreage must go to corn.

1. What do you think of 500 pounds to the acre of acid phosphate and cotton seed meal mixed in equal proportions and applied broadcast?

2. How would it then do to plant corn two feet apart in rows six feet apart, and then plant cow peas between the rows of corn, thus having corn and peas alternating in rows three feet apart?

3. Where can I get that corn spoken of by Prof. Massey in the following words? "We have a corn that bears uniformly two or more ears near the ground, and of a stature that admits of its being planted nearly as closely as in the North." To my mind we need a change in our corn plant.

4. What ought cotton seed meal to cost?

Norfolk, Va.

J. T. H.

1. The acid phosphate and cotton seed meal should help your corn crop considerably, and probably will make as good a fertilizer as you can use for that purpose. Whether it will be profitable is doubtful.

2. We should think five feet apart in the rows with cow peas between ample distance apart.

3. This corn was grown at the Experiment Station, Raleigh, but we do not know whether they have seed for sale.

4. It is quoted to us at \$26.50 by the ton, f. o. b. Richmond.—Ed

IMPROVING POOR LAND.

Give me a method for bringing up thin land quick. How would it do to sow Cow peas after a deep plowing and 200 pounds bone meal, using disc harrow to get the land in good condition, and in the fall roll the pea vines down, sow rye and then cut the peas up with a disc harrow until the rye is covered in, or do you think best to turn the peas under and then sow the rye? I want to turn the rye under in spring and then plant in corn. Do you think by turning the vines and rye in they would sour the ground?

Cabell Co., W. Va.

SUBSCRIBER.

After plowing the land apply 300 pounds one-half acid phosphate and one-half bone meal to the acre, sowing one bushel Cow peas to the acre. Cover well with a disk harrow or drill the peas in, thus saving one-half of the peas. In the early fall plow the peas down and sow on the land ten pounds Crimson clover and three-fourths of a bushel of wheat. Winter oats and rye mixed together. This will make a better cover for the land than rye alone and will improve it quicker than rye will. In the spring turn this crop down and plant corn. If you can cover the land with farm yard manure during the winter you will no doubt be able to make a fair crop of corn. You need have no fear of souring the land by turning the crop of peas down in September after they have begun to die down. There is no risk run of souring the land by turning green crops under in the spring.—Ed.

SICK PIGS.

I have three shoats, out of a lot of nine, that are singularly affected. They have some throat or lung trouble; their breathing is very hard. Seem to suffer like a man with asthma. Can you give me a reason and also a remedy? They have a good appetite and do not seem to lose flesh.

W. G. Ivry.

Chesterfield Co., Va.

The pigs are suffering as you state from some throat and lung trouble. We have seen little pigs affected in this way in cold weather when they have been sleeping on a

bed of hot manure and then have gone directly out in the cold air. Keep them dry and warm in cold weather and let them out of doors as much as possible during fine and sunny days and make them ramble about when they are out. They will probably get all right again as the weather becomes warmer. You might give them a little saltpeter, say about the size of a nut, once or twice a week in their food, this will probably help them.—Ed.

LEE'S LIME—CAUSE OF DEATH OF CATTLE.

1. Please state the value of "Lee's Prepared Lime" as a land improver, and say what quantity should be used per acre.

2. I lost two cows last week without apparent cause. On skinning them I found a large number of grubs, commonly known as "Wolves," on either side of the back bone. Please state whether it is likely death was caused by the presence of said grubs, and tell what means can be used to prevent their appearance, and what remedies can be used to kill them. D. J. WALLER, JR.
Spotsylvania Co., Va.

1. We have never used Lee's Prepared Lime but have had reports from subscribers speaking favorably of it. Lee & Son issue instructions as to the quantity to be used per acre for the production of different crops. Write them for this.

2. Whatever may have been the cause of the death of the cows, certainly the so-called "Wolves" found on either side of the back bone had nothing whatever to do with it. We wrote fully on this question in our last issue. These "Wolves" are the grubs of the gad fly taken into the stomach of the cow and passed on to the tissues under the skin of the back and from thence they emerge through the skin and hatch out into the fly again. Beyond making a hole in the skin they cause no other injury. There is no means known of preventing them getting into the cattle. The best thing to do is to squeeze the grubs out of the holes and kill them and thus lessen the quantity of gad flies for another season.—Ed.

REEDS—DEEP PLOWING.

1. Give me some advice how to destroy reeds. I have a piece of land full of them.

2. Also advise as to deep plowing. My land is light. It is on the Sand near the ocean. The general opinion of farmers down here is to plow shallow. I think deep plowing would be more profitable. E. F. P.
Onslow Co., N. C.

1. The only way to get rid of the reeds and rushes out of the land is to drain it. They will only grow in wet land. After the land becomes dry cultivate it and you will get rid of them. Some lime applied to the land will help.

2. Never mind what your neighbors say plow the land deep and you will get better results.—Ed.

PLANTING COW PEAS.

Can you tell me if there is any implement that will sow cow peas in my corn rows after the last plowing? I plant a good deal of sugar corn 3.6 by 4, and I thought this year I would try cow peas after the last plowing, which would be around August 1st to 10th, if there is a horse implement that will drop these seeds and cover them all right. Baltimore, Md. JOHN M. DENNIS.

Yes. Most of the new corn-planters can be adjusted to plant cow peas or other small seeds between the corn rows. They have interchangeable plates to adapt them to the different sizes of the seeds and drop these close or far apart in the row, as desired. Ask your implement dealer, or write

some of the advertisers of corn-planters whose ads appear in this issue for a planter adapted to this work.—Ed.

COW PEAS AS IMPROVERS OF LAND—LIME.

I have seen so much in the SOUTHERN PLANTER about the value of Cow peas that I feel this section of the State should derive some benefit from them. I want to try about fifteen acres, and wish to know first how many peas to sow and would like to know your opinion as to plowing down the whole crop or cutting for hay. I want to sow the fifteen acres in wheat and grass this fall. It has become almost an impossibility to get a stand of clover, and I cannot help thinking fertilizer has a great deal to do with it, and that we should adopt some other means of keeping up our lands. Which is the best way to apply lime?

A SUBSCRIBER.

We are satisfied that you would be benefited by growing Cow peas in your section of the State. In April issue you will find a short article advising as to the best varieties to use. If you drill the peas a half bushel or even less to the acre will be sufficient, if sown broadcast you will need a bushel. Drill them about eighteen inches or two feet apart in the rows and give the land 300 pounds acid phosphate to the acre and you should get a good growth. The statement that as good results can be obtained from turning the stubble only under and taking off the vines for hay is not true. It is true that the stubble and roots alone will considerably improve the land but not by any means as fast as if the whole crop was turned under after it had become fairly matured. The peas should have begun to ripen and vines to die down before they are turned under. Experiments made in a number of places show that the vines from a given acreage weigh six times as much as the roots and are eight and a third times as valuable as manure. We are, however, strongly in favor of the practice of cutting the vines for hay when the crop is grown on fairly good land as this hay is most valuable for stock and will take the place of bran in the rations, but we would leave a heavy stubble and many of the vines as are missed by the mower. The stubble with these missed vines make a considerable addition to the fertility of the land and the hay from the vines will be found most useful. On thin poor land we would turn the whole crop under. Where the land is to be put into wheat we would also advise taking off the vines in the manner we describe for hay as turning a heavy crop of vines under just before seeding the wheat, which is about the best that can be done, will make the land too puffy and light for the best doing of the wheat crop. In March and April issues you will find advice as to the use and application of lime.—Ed.

KILLING SASSAFRAS.

Please say through the columns of PLANTER that the best and easiest and only sure way to kill sassafras is by cutting it down and turning cattle or goats or sheep enough on to it to keep it eaten close as the young sprouts put up, and not to plow the land at all whilst this is being done. Keep this pasturing up for three years and the sassafras will be dead, root and branch. This is an actual experiment made and not a supposition. I have tried burning, with no success. HENRY COLLIER.

Scott Co., Va.

FLY REPELLANT.

Please tell me in the next issue of your valuable paper what will keep the flies off horses in the summer. Southampton Co., Va. A READER.

There are a number of fly repellants advertised in the summer issues of our journal and the daily papers and

we suppose these are about the best things that can be used to keep them off. We have known a decoction of Elder tree leaves made by boiling the leaves and branches in water and the horses sponged over with it. This is objectionable to the flies. This, of course, can be made at home at no cost beyond the trouble.—Ed.

FEEDING COTTON SEED MEAL—ACID PHOSPHATE AND BONE MEAL—SWEET POTATO GROWING.

1. I would like to inquire if there is any danger in feeding lambs and ewes cotton seed meal, in lieu of linseed meal, say about one-fourth cotton seed meal and three-fourths corn meal.

2. I would also like to inquire if we should drill about 200 pounds of raw bone meal and 200 pounds of acid phosphate per acre on our corn land in the spring where we desire to sow rye broadcast in the corn at the last working, if a large portion of this acid phosphate is not available for the rye and grass seed?

3. Does growing sweet potatoes on land exhaust the soil without the use of commercial fertilizer? If they should be fertilized, about how much acid phosphate should we use to the acre and how much potash? The land in question is a clover sod, and I do not think needs any ammonia.

4. What amount of phosphate and potash would compensate land on which we should grow peas and desire to remove the vines, and would like to have the land as productive for corn the following year as if the vines had been turned under?

A. D. REYNOLD.

Sullivan Co., Tenn.

1. Yes, you may safely feed cotton seed meal to ewes and lambs in the proportions you mention.

2. Considerable part of the phosphoric acid in the bone meal will be left available for the rye and grain crop. That portion supplied by the acid phosphate being in a more available condition will be largely used up by the corn though some benefit will accrue to the rye and grain even from this.

3. Sweet potatoes will exhaust the land unless assisted with farm yard manure or commercial fertilizer. On the clover sod you need not use any ammonia but should apply 300 pounds acid phosphate and 50 pounds muriate potash to the acre.

4. In a reply to Subscriber in this issue you will find information as to the amount of plant food in the vines and roots of Cow peas respectively. From this you will see that the vines have much the larger proportion of the plant food furnished by the crop. It is difficult, however, to say what amount of phosphate and potash will compensate for the removal of the vines because of the fact that the more potash and phosphoric acid applied the greater will be the growth of the vines and hence the draft on the land.—Ed.

LEAF CURL OF PEACHES—THE PROSPECT FOR A PEACH CROP.

I will appreciate it very much if you will kindly advise me as to the most effective treatment for leaf curl of peach trees. We have a little orchard for domestic use that is being literally destroyed by this fungus pest.

I suppose some spray should be used, and I will thank you to indicate the kind of spray—that is the ingredients—and in what proportion they should be used, or to what extent this solution ought to be diluted?

W. W. BIRD.

Russell Co., Va.

I have had considerable trouble with peach curl during cold and damp weather in the early spring. If the weather should be favorable for leaf growth the foliage soon out-

grows the attack of the disease. I never saw trees seriously affected with the disease in the summer.

I have had no trouble in preventing the disease by the use of Bordeaux mixture, if applied very early before the buds open. My formula for this mixture is two pounds of blue stone, three pounds of unslaked lime and twenty-five gallons of water. Should the disease be bad after the leaves come out and spraying had been neglected, an application of Bordeaux even this late will often be beneficial in keeping the fungus off the young foliage that will come out later.

In this connection I might state also that I have sprayed peach trees with lime and water before the buds swelled and the foliage came out remarkably clean and healthy. That the lime, sulphur and salt spray would be very useful in preventing the disease, I have no doubt whatever, but I have not used it.

I would be glad to hear from growers through the PLANTER in regard to the condition of the peach crop. The cold weather of the 18th of April was very trying on the peach. The fruit crop of all varieties, not hardy in bud, is apt to be killed. I would like to know what varieties passed through the cold weather with any prospect of a crop, also what varieties lost all the fruit. This information would be most valuable to the peach growers of the State and the opportunity may never be better to get this information. Write a postal card to the PLANTER about your fruit crop.

R. H. PRICE.

Montgomery Co., Va.

LAND SUBJECT TO OVERFLOW BY THE SEA—GRUB WORMS.

1. I want your advice about a very much run down farm in the tidewater of Virginia. This farm is low and of a dark gray color, stiff clay nature, and we have under certain conditions high tides that rise over most of the soil. The condition is a southeast gale changing to southwest the tide will rise four or five feet higher than usual and covers the land from four to fifteen inches deep, according to elevation. Last fall we had one of these tides that did much damage to clover and strawberries, killing all that it rose over.

Now, what I want to know is how to raise a crop of corn on this land? After the sun shines a few hours on the land a white substance rises out of the ground and is just as salt as brine. Please give advice how to make this land productive, and how deep to cultivate crops, and also what kinds of fertilizer it would be best to apply for corn this year. Can I get alfalfa to grow on this land?

2. Please give remedy for grub worms in young strawberry beds that kill lots of the plants and make beds broken. Also state what variety is best suited for this locality.

SUBSCRIBER.

Accomac Co., Va.

1. On land of the character you describe and subject to salt water overflow, we are afraid you cannot hope for any very successful crops. Land so impregnated with salt as this of yours appears to be from the description given cannot be made into a fertile soil. Salt has no manurial value, and when in such great quantities as must necessarily be the case to cause such a deposit on the surface following the drying out of your land, would prevent good results being obtained from the application of either manure or fertilizer. The proper thing to do with this land in order to make it profitable is to bank out the sea water and drain it, until this is done, we think it would be an unprofitable business to endeavor to raise good crops upon the land. There are thousand of acres of such land

all the way up the New England coast and experiments have been made with crops on it but only salt marsh hay has been found, adapted to growth and this only sells for a very low price and has a low nutritive value. It would be useless to attempt to grow alfalfa on this land.

2. There is no immediate way of getting rid of the grub worms in the strawberry beds. The remedy for them is rotation of crops, in which a grass sod is not allowed to stand more than one year at a time. The grubs are bred in the grass sod. Some may be poisoned by dropping balls of bran and Paris green mixed with some molasses over the field, but this remedy is practically of no great service in a strawberry field where other food is abundant. It is effective on bare land with many of the grubs and cut worms. There is such an infinite variety of strawberries, having only a local adaptability that we hesitate to advise any special variety for your section. Make inquiry of the local growers as to the varieties they find best adapted and experiment for yourself with varieties which have been raised in your section. There are several growers of plants on the Eastern Shore, many of whom will be more competent to advise you on this subject than we can possibly be.—Ed.

LOSS OF CUD.

I have a cow that I think has lost her cud. Is there such a thing? She is swollen very much about the stomach and is heavy with calf.

H. N. DICKINSON.

Caroline Co., Va.

So-called loss of cud of the cow is no disease itself but is only an indication of some digestive trouble affecting the cow. When her digestive organs become normal and active again the cow will resume cudging her food. You should give the cow a purgative, say one pound Epsom salts to be followed after this has operated with a tonic drench made up of three ounces powdered gentian, three ounces bicarbonate potash, three ounces powdered ginger and one ounce capsicum mixed and divided into twelve powders, one of which should be given three times a day, before feeding, in water or whiskey and water.—Ed.

PREPARATION FOR ALFALFA—HANOVER SWEET POTATO CROP—NITRO CULTURE CO.—BLACK EYE AND BLACK PEAS.

1. I have an acre of land I intend for alfalfa next fall. I expect to manure and fertilize it. Will have to manure this spring, as I have the manure on hand. Will not use the fertilizer until fall. Could I raise a crop of Cow peas? If the Cow peas should be cut green would they be any benefit to the land?

2. Will you try to find out how many sweet potato seed, both white and yellow, Hanover has sold this spring?

3. Is the National Nitro Culture Company of Pennsylvania all right?

4. What is the difference between a black pea and a black eye as an improver?

SUBSCRIBER.

Hanover Co., Va.

1. In this issue in our article on Work for the Month, you will find our views on preparing land for alfalfa seedling in the fall and to this we refer you. Although you might have to cut the peas before they have made their complete growth in order to seed the alfalfa in good time, yet they would have served two good purposes; first, having added to the plant food in the soil and improved its mechanical condition; second, by having smothered down the weed crop.

2. We have no means of ascertaining what quantity of sweet potato seed has been bought in this city by the deal-

ers. Probably some of them may furnish us with the information when they see the inquiry and if so, we will gladly publish the same. From our own observation we know that an enormous number of barrels have been brought into the city from Hanover and shipped away.

3. The National Nitro Culture Company is a reliable firm.

4. There is practically little difference between the black eye and the black pea as an improver of land. The black pea makes a heavier growth of vines and, therefore, supplies more humus to the soil than the black eye, but they are both the same in respect to the gathering of nitrogen from the atmosphere; probably also the black pea roots deeper than the black eye and thus breaks and aerates the land more than the black eye.—Ed.

HOG FEEDING.

Will you please inform me whether or not hogs that are fed on swill from a distillery are benefited to any extent and also after being fed for a month or more can you take them away at your pleasure with safety for pasturing?

Pittsylvania Co., Va.

H. E. BARKSDALE, JR.

We have no high opinion of the value of distillery swill for feeding hogs. There is only a very small amount of nutriment in it. Whilst they may fill themselves, they will not make progress either in growth or fat. We do not suppose taking them off such food and putting them on the pasture at once could injure them. On the contrary we think that they would be very much benefited by it.—Ed.

CORN YIELD REPORTED IN SOUTHERN PLANTER.

SOUTHERN PLANTER, page 180, March, 1905, says: "Four acres, nine and one-half barrels; 457 1-2 bushels, a little over eighteen barrels per acre."

The writer is so obtuse he can not understand. Will you kindly explain?

N.

This is a serious printer's blunder. The paragraph should read: "From five acres of my best land I housed 91 1-2 barrels (457 1-2 bushels), a little over eighteen barrels per acre." We regret that this error was overlooked in correcting the proof. We were much pressed for time and just beginning a severe attack of the grip. This must be our apology.—Ed.

RAPE.

I have about two acres of good loam soil that I want to plant in Soy beans this spring and next fall turn my hogs on the beans. I want to know if rape will grow sown between the rows, say in August, and will it help to fatten my hogs? If so the best way to sow it, broadcast or drill in center of bean rows?

SUBSCRIBER.

Prince George Co., Va.

If the Soy beans do not make a heavy growth on your land, rape sown between the rows in August will make good growth by October or November for the hogs; but if the Soy beans make a heavy growth, they will smother the rape. Rape is an excellent food for hogs and sheep.—Ed.

PECAN TREES.

Will pecan trees do well in this county and how long will it take them to bear?

J. B. ABERNATHY, JR.

Brunswick Co., Va.

Yes, pecan trees will grow in your county and will also bear nuts there, though Virginia is a little north of the best section of the country for the production of this crop. We know of trees bearing nuts north of James river and also in Piedmont Virginia. They usually commence to bear from 5 to 7 years after planting.—Ed.

Miscellaneous.

THE REPORT OF THE VIRGINIA STATE BOARD OF AGRICULTURE AND COMMISSIONER KOINER.

In our last issue in our notices of reports received from different Boards and Institutions we noted the receipt of the report of the Virginia State Board of Agriculture and of Commissioner Koiner, the executive officer of the Board. In the discharge of what we felt to be a duty we owed to the agricultural interests of the State we found ourselves unable to approve the report and constrained to comment adversely on its very obvious shortcomings. That in this opinion we were not singular is evidenced by letters which we have received from one of the largest land owners and farmers in the State, a Virginian of the best type. He says, "Having large agricultural interests in Virginia please allow me to thank you for the just criticisms in the April number of the *SOUTHERN PLANTER* on the extremely defective report recently issued by the Virginia Department of Agriculture. Every Virginia farmer is anxious to know just what is being done in agriculture in this State and the annual report of the Virginia Department of Agriculture ought to be an authentic record of the State's progress in agriculture from year to year and yet one looks in vain for information of this kind in the annual report which one throws aside each year with only a feeling of disgust and disappointment." Our correspondent is perfectly right in the view he takes as to what the report of the Board and Commissioner should be. The object of the Legislature in requiring Boards and officers to make annual reports of the progress of their work is to enable the Governor to make recommendations to the Legislature for needed legislation and for the legislators themselves to see that these recommendations are well founded and the legislation needed. In order that the various Boards and Institutions may not be able to plead lack of appropriations sufficient to enable them to make these reports as full and complete as possible the cost of printing these reports is borne by the State, but it is the duty of the Auditor to see that such reports so printed at the State's cost are strictly confined to matter pertinent to the due execution of the work of the Board or officer. In illustration and support of this position we recall that some years ago when the State Board of Agriculture had only a limited and strictly fixed appropriation, instead of as now, when it has its hands in the pockets of the taxpayers to help itself, in our opinion a most unwise arrangement, the Board added to the report of the Chairman and Commissioner a large number of pages of

just such matter as we now find making up 99 hundredths of the report under discussion, and sent the bill for the whole book to the Auditor for payment. He declined to pay except for the printing of the actual report of the Chairman and Commissioner and said the Board must pay for the remainder out of its appropriation. The Board excepted to this construction of the law and the matter was referred to the Attorney General for his opinion. He, without hesitation, upheld the contention of the Auditor and the Board, deeming "discretion the better part of valor," assented and paid. Whilst it is and ought to be entirely within the discretion of a Board to publish such matter as in its judgment it thinks will be of service to the interests it was appointed to guard and advance, yet this is an entirely different matter from the official report of the Board and its officers, which should be strictly confined to giving a report of the work done, of the interests committed to its care, and of the recommendations for needed aid, whether in the way of money or legislation, which in its judgment are calculated to ensure progress and efficient work. In the report under consideration there is little if anything bearing upon these points, the most we can find is a plea for further money for the work of the Board, and this would seem in the face of the financial statement published to be a need not evidenced, as the report itself shows the Board to have had an income during the year under consideration of \$41,142.57, of which it had only found need to expend \$29,560.04, thus leaving a balance unexpended of \$11,582.53, surely a poor showing to come before the Legislature with to ask for more money, especially when taken in conjunction with the statement of the President of the Board that notwithstanding the large sums expended on the work of the test farm "the results obtained have been very disappointing and the Board will inaugurate a change of methods there the coming year." If all we hear as to the work done or attempted to have been done at the test farm are true, and we have reports from the highest authority on such work, the description of the President is a very mild one for a miserable failure and waste of thousands of dollars. We have, however, no desire to be too severe on the Board or its officers. Our course and policy has always since the creation of the Board been to uphold its hands and to credit the gentlemen who have given their ability and time to the service of the agricultural interests of the State with a sincere desire to advance in every way possible those interests. Whilst

we have for several years past, and especially in this matter of the Test farm, doubted the wisdom of the course followed and policy pursued, we have never doubted the *bona fides* of the Board or its officers. We have doubted and still do doubt the executive and technical ability of those charged with carrying out the orders and desires of the Board. Our object, however, in now again adverting to this subject is to arouse the farmers of the State to the importance of securing from the candidates for the Governorship and other official positions in or near the Legislature definite statements as to their policy on this question of putting before the people a full and accurate statement of the agricultural interests of the State and how best those interests can be advanced. We have thousands of people seeking information as to our lands. There ought to be some authoritative document or report to which they can be referred for reliable information. It seems to us that it is the duty of the Governor and Legislature to see that this is supplied and that the Board and its executive officer should be compelled to make this and definite information as to our agricultural interests and their advancement, the primary object of their labors and reports. We urge farmers to attend the meetings now being held in support of the various candidates for official positions and ascertain their views on these subjects.

EXPERIENCE OF A NEW SETTLER IN VIRGINIA.

Editor Southern Planter:

As a subscriber to the SOUTHERN PLANTER for nearly three years past, I wish to express the satisfaction with which I have read your most interesting paper. I have found so much useful knowledge in the many articles contributed by men of well-known veracity and integrity that I can't help but feel that your paper is almost a necessity to the Southern farmer. *I believe it would be a blessing to Virginia itself were provision made by which a free copy for two consecutive years could be presented to every farmer or planter who is not now a subscriber.* I have travelled through many counties in Eastern, Middle and Southside Virginia and have been amazed at the enormous neglect that characterizes so many Southern farmers. With such a favorable climate, giving opportunity for outdoor work nearly all the year round, how much can be accomplished if one only tries, and yet how few avail themselves of it. Would that every farmer in Virginia would endeavor to carry out the teachings of such eminent and capable men as Prof. A. M. Soule, W. F. Massey and

yourself, besides many others. What a change could be wrought in the condition of the average farm and the farmer himself. All that is required is application to the work on hand and steadfastness of purpose.

Look at the experience of many a new comer in the South, and were truth told and facts made known, it would be interesting indeed. After running the gauntlet of many culture-like real estate men (such being the worst drawback to the progress of the South) he is then considered fair game in the community he may happen to locate. Under the guise of friendliness and solicitation, he is many times exposed to the unscrupulous dealings of persons who are too indolent to make a livelihood by hard work, but seek gain by defrauding others. How much kindly assistance is rendered the average newcomer, let me ask? Yet, how much good that newcomer may do for his immediate neighborhood. Take, for instance, an old run-down place amid some right good farms; how such a place lowers the value of those farms adjacent! Then let that same old place be cleared and cleaned and brought under cultivation, and how much it raises the value of those adjoining farms. Therefore I claim it is to the interest of every one in a farming community to encourage a newcomer in making a home amongst them and assisting him in overcoming the many hindrances and obstacles that present themselves, especially during his first years residence. How true the old saying, Help your neighbor and you never more surely help yourself; but does actual experience prove that such is the case? Let the newcomer answer as to that.

One year ago the 9th of January my brother and I took possession of just such a run-down place, grown up every where to old-field pine, locust, brambles and broom sedge, less than one-tenth of open land under cultivation. No fences, no barns, no nothing, it seemed. It was a dreary outlook last January a year ago, but my brother, who is stout of heart, with enthusiasm, energy and determination in abundance, went bravely to work, I not taking much part, as my duties claimed me elsewhere. Miracles were not performed, yet changes have been wrought that are more than convincing that these much-abused acres can be made to produce paying crops by intelligent farming, as so eloquently set forth in the columns of the SOUTHERN PLANTER. Why is it that a larger number do not follow the simple rules and laws of nature so continuously advanced by men of larger experience and scientific research.

By deep plowing, and thereby breaking up the hard pan formed in years past by shallow plowing, and a thorough preparation of the seed bed we were enabled

to produce crops equal to the best in our vicinity—so admitted by many. This on land considered too poor to produce a crop by the former tenant. We had six acres of as fine spring oats as any one wishes to see. We cut seven tons of millet hay, raised 300 bushels of Irish and 60 bushels of sweet potatoes, and many small experimental crops. We had about twelve acres in cowpeas and beans; a fair crop of buckwheat (storm destroyed one-half the crop); raised a fine crop of broom corn; seeding last fall 20 acres to rye and wheat and 22 acres to the various grasses, besides seeding an experimental plat of three acres to alfalfa; also building about two miles of hog fence, erecting a hog house 18x20 feet and a double corn house 36x27 feet, with driveway between, and there is now plowed over 40 acres for this year's crops, and 200 rods more of fence under construction, thus having cleared and cleaned and brought under cultivation over 175 acres, most of which we were told had not been plowed in twenty years. This has all been accomplished during the past year at a comparatively small expense, and only in the South, according to my experience, is such a thing possible, with its cheap labor, cheap material and delightful climate. The foregoing crops were grown on so-called poor land, without any manure and very little fertilizer. I do not mean to convey the idea that we expect or desire to continue this method indefinitely, but I do mean to say for the benefit of any one contemplating buying a so-called worn-out farm, that he can produce a crop the first year that will put him in position to commence the second year on a fairly good basis. A hard feature to contend with on such farms the first year is the almost universal lack of grass for hay crop, which necessitates the purchasing of all feed stuffs. Even much of this expense can be saved by feeding the spring oat crop, straw and all, cow peas, millet, etc.

During the past year much useful experience has been gained as to seasons, nature of soil, local conditions, etc., so with well-based scientific plans much is anticipated for the coming year. We hope in a few years to still more transform the desolate appearance of a year ago into the garden spot of Powhatan county. With apparently a sufficient supply of feeding material coming on, we expect to carry as much live stock as our conditions will warrant.

There is an idea which has recurred to me with great force during the past two or three months on which I would like the assistance or benefit of some one's practical experience. Can James river low-grounds be successfully tile drained to open ditches, so as to do away with that abomination of plowing

in what are called *lands* or *beds*? This, I think, is of great importance, as it would give a much needed change of cultivation. Could you inform me in the columns of your valuable paper on the above matter; also giving the address of parties nearest Richmond selling such tile drains. I have examined every issue of the SOUTHERN PLANTER in my possession, and I find no mention of the subject.

I hope I will have the satisfaction of reporting a full measure of anticipated success in our operations at Hunter's Fare Farm during the coming year.

Powhatan Co., Va.

H. B. BUSH.

Drain tiles can be had from the Powhatan Clay Co., Richmond, Va.—Ed.

THE BUSINESS OF FARMING.

(Continued.)

We have considered the sources and the cost of the three essential elements of plant food. We have seen that these elements are required in different proportions for the soil and the crops. Shall we supply these substances in uniform amounts, or will it not be a more practical method to supply each field and each crop in the proportion that they require these substances. The analyses of the various crops will aid in understanding the amount of these elements removed from the soil, and the use of trial plots eight or ten feet wide across the field to which one or two of the three elements can be applied as fertilizers, will give us the desired information as to the requirements of the soil.

In the business of farming we will find that it will be a good policy to purchase our plant food in the cheapest and simplest form and mix these substances as we desire them for use. In the calculation of the value of a fertilizer, use may be made of the method of the unit. If a fertilizer contains 1 per cent. of any substances, it is a unit per ton. The nitrogen as ammonia will cost from \$2.70 to \$3.30 per unit, an average of \$3. The potash will cost as sulphate \$1.15, and in the other forms \$1 per unit. The phosphoric acid will cost 80 cents per unit. The value of the fertilizer can be found by multiplying the per cent of ammonia by \$3, the per cent. of potash by \$1 and the phosphoric acid by 80 cents. While the results can only be regarded as approximate, yet they will serve as a guide and will be of value.

We have given special attention to the sources and the supply of our material for use in producing the future products. The machinery of the farm, or what is usually called the plant, is to build these substances with the aid of the substances present in the air into marketable products.

In order to make any manufacturing business a success, it is necessary to keep our machinery in the best condition, and the latest improvements must be introduced from time to time so that the capacity for production is the highest that is possible. On the farm this means that the seed corn must be selected carefully: the same with the wheat, oats and other seeds. In this selection we should pay particular attention to the entire plant, and not restrict the attention to one product alone, and as a result we will have the vitality of the seed at its highest efficiency for producing the maximum crop from the stock of plant food in the soil. There is an excellent opportunity at all times to improve our seed by proper selection.

It does not matter, however, whether we have a great stock of plant food on hand, and the best of plant machinery or seed for producing the product from the plant food if the means of transferring the plant food to the plant is lacking. To transfer the plant food to the plant requires water to dissolve the substances in order that the root of the plant can absorb them. The water supply of the soil is one of the most important materials that are necessary for the growth of the plant. Unfortunately, this important feature of the soil is too often neglected. Every one is familiar with the disastrous results from the lack of water in the soil. Many have seen the work of the year become a total loss from the effect of a short drouth at some crucial period of the growth of the crop. Can the water-holding capacity of the soil be increased is a question of the greatest importance to every farmer. In the West some of the soils will absorb water to the extent of 25 per cent., while with other soils it is doubtful whether they will hold over 10 per cent. of water. If a cubic foot of soil weighs 70 to 80 pounds, and one acre has 43,650 feet, one can realize the great amount of water at command of the plant in a soil containing the larger amount of water. The means of increasing the water-holding capacity of the soil can be better understood when we consider the influence of some of those substances which enter into its composition. In this connection, the following results are of interest:

PER CENT. OF WATER ABSORBED BY 100 PARTS OF MATERIAL.

Sand	25
Sandy clay	40
Arable soil	52
Garden earth	89
Humus	190

A glance at these results shows us the great value

of the vegetable matter or humus in its influence on the water-holding power of the soil. The practice of turning in green crops is a valuable one in every way. This method enables the farmer to supply the nitrogen and the humus at a minimum cost.

The humus in the soil is constantly undergoing changes as the result of the action of bacteria. If the nitrogen is added to the soil in the form of vegetable matter, it undergoes a change caused by the bacteria, and nitrates are the result. The plant growing in the soil will absorb the nitrates to produce new vegetable matter, but if no plants are present these nitrates will be carried off in the drainage water and a loss will result. The loss of nitrates from the soil can be prevented at all times. The loss that results from the process of nitrification is larger in the South than in the colder countries of the North.

The production of the crops of corn, wheat, oats and other products brings before the farmer a new problem. Shall these products be sold or shall the manufacturing processes be continued and the grains be fed to animals, thus producing a higher product.

The business farmer will conclude that it is best to feed all the crops on the farm, selling only products of the highest grade that can be produced. The elements of plant food will then remain on the farm and be returned to the soil in the form of manure, thus adding humus constantly.

The introduction of business methods by the farmer: careful attention to the cost and the selling price of his products will mean success in farm operations. Increased confidence in his ability will bring more interest in the farm work in addition to pleasure and profit in farm operations. In conclusion, it may be said that the business of farming requires—

(1) The purchase of the supplies of plant food in an intelligent manner.

(2) The use of the best in the way of seed, plants and machinery.

(3) A thorough understanding of the various processes connected with the growth of the plant in the soil.

(4) The production of the highest grade of products, selling at the highest prices, and which will remove the smallest amount of plant food from the farm.

To meet these requirements it will be necessary to combine a high grade of business ability with those of the engineer and the scientist. The future farmer must in other words be a biological engineer, and the opportunity that is before him in this field of labor has no equal in the world.

J. B. WEEMS.

Nottoway Co., Va.

THE Southern Planter

PUBLISHED BY

THE SOUTHERN PLANTER PUBLISHING CO'Y,
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.B. MORGAN SHEPHERD,
Business Manager.TERMS FOR ADVERTISING.
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, Va.

NO ANONYMOUS communications or enquiries will receive attention.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

SUBSCRIBERS failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

Address THE SOUTHERN PLANTER,
RICHMOND, VA.

Entered at the Post-office, Richmond, Va., as second-class matter.

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PUBLISHER'S NOTES.

To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month.

TRIAL SUBSCRIPTION OFFER.

There are thousands of farmers who do not read the Southern Planter but who should do so.

As we are not able to personally solicit subscriptions from such farmers we are going to rely on our friends, as usual, to help us out. Any person who is not now a subscriber can have THE SOUTHERN PLANTER the rest of the year, nine issues, for 25 cents. We will start these subscriptions with the April number as long as the edition lasts. Should other subscriptions come in between now and June 1st we will start these subscriptions with the current issue. We will not be able to supply any back numbers.

Mention this offer to your friends.

Onslow Co., N. C., 4-12-'05.

I would like for every farmer to read THE SOUTHERN PLANTER.

E. F. POLLARD.

Mecklenburg Co., Va., 4-13-'05.

I am much pleased with my issues received since I have been a subscriber to the SOUTHERN PLANTER and feel that it should be worth double the money asked for it.

T. G. POOL.

Wood's Seeds.

New Era Cow Peas

are rightly named. They are the best of Cow Peas, whether for northern, western or southern planting. They are early to mature, upright in growth, enormously productive, both of vines and peas, and are altogether the most satisfactory and sure croppers grown.

We are headquarters for Cow Peas; had over forty different varieties in our exhibit at St. Louis, on which we were awarded the Grand Prize.

Wood's Descriptive Catalogue gives the fullest information about Cow Peas and all Garden and Farm Seeds. Write for it and special price list of Farm Seeds.

T. W. Wood & Sons, Seedsmen,
RICHMOND - VIRGINIA.

If you want the sweetest and best Water Melons and Cantaloupes grown, plant Wood's Southern-grown seed. Our Descriptive Catalogue tells all about the best kinds to plant. It's mailed free for the asking.

AGENTS' FINE SAMPLE SENT ANYWHERE
ON RECEIPT OF

\$1.50



QUICK GAS FIRE FROM KEROSENE OIL



Our Oil-Gas Fuel Burner converts any Coal Range or Wood Cook Stove into a Gas Range without any alteration, and works perfectly in any stove. Guaranteed Absolutely Safe and reliable out of order in five years. Burns common Coal Oil, heats the room quickly, and is easy to set up. Oil, cheap, convenient. PRICE \$3.00. Free trial sent at once. Write for it now. Agents wanted.

OIL-GAS F. B. Co., Dept. 8, Baltimore, Md.

Fontaine Shock Binder.

A strong windlass weighing only three pounds. Prevents corn shocks from falling or being blown down. Prevents shocks getting wet inside when it rains. Saves labor of two men. A great help in stacking wheat, oats, etc. Best endorsed farming implement in the United States. Sent, express prepaid, for \$1.75. Write for circular. Agents wanted. THE FONTAINE CO., Christie, Va.

In writing mention Southern Planter

BANK OF RICHMOND,

Main and Tenth Streets.

CAPITAL AND PROFITS, - - - \$1,134,938.14.

Special attention paid to out-of-town accounts. Correspondence invited.

Three per cent. interest allowed in Savings Department.

Compounded semi-annually.

For All Leaf Eating Insects

spray with

Swift's Arsenate of Lead

It will not burn.
It sticks and will
not wash off. ☘ ☘

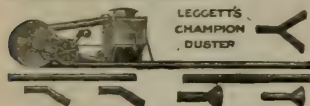
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BOSTON, MASS.

Be sure and get Swift's. If your dealer does
not handle it, write direct to us.

Leggett's Dusters

DISTRIBUTE INSECTICIDES IN DUST FORM.
Saving Fruit and Vegetable Crops when
other methods fail. NO BARREL OF WATER
TO HATL. Two acres of Potatoes or
Tobacco dusted per hour. Several styles
for garden, farm and orchard.



Our Spray Calendar gives concise information regarding dusters and materials. Mailed on request.

May be purchased in Richmond, Norfolk, Baltimore, Louisville, Jacksonville, Aurora, N. C., Washington, N. C., Martinsburg, W. Va.

LEGGETT & BRO., 301 Pearl St., New York.

SPRAY

FORCE PUMP

HAS NO EQUAL

PRICE REASONABLE

CATALOGUE FREE

AGENTS WANTED

THE HOIL MFG. CO.

353 MAIN ST.

BUFFALO, N. Y.

Brass Sprayers Last Longest And Are The Cheapest To Buy.

Price \$3.50 and upward. Never Your Best and most
best extra good. It is by detaching the insect material
plant diseases which cause trouble. Note. These sprayers
may often be used for spraying water and can be used for
pumps, spraying, blowing, fanning, leveling, weeding, cutting
surface, digging in, cutting, and many other
purposes. Sprayers may be returned at our expense if
they are found defective. Send for catalogue.

DAYTON SUPPLY CO., Dayton, Ohio.

WITH THE ADVERTISERS.

Attention is called to the ad of T. C. Andrews & Co., Norfolk, Va., who make a specialty of preparations for the destruction of potato bugs and all other plant eating insects.

Some finely bred Berkshires are offered in this issue by Mr. Phil G. Gold. Look up his ad.

The Strawberry Hill Poultry Yards are making a special offer this month on eggs and their finely bred Plymouth Rocks.

Mess. F. H. Jackson & Co. are offering their well known Kentucky Stock Label elsewhere in this issue.

Some splendid thoroughbred horses are offered by Mr. S. H. Wilson, of Byrdville, Va.

A fine laying strain of Black Minorcas is advertised by Mr. I. L. Anderson. Refer to his advertisements.

The American Saw Mill Machinery Co. are new advertisers in this number. They have an attractive announcement to which we invite attention. The Watt Plow Co. are their local agents.

Mr. W. H. Macnair is offering a preparation which is sure to interest all poultrymen.

The Rife Engine Co. starts the season's advertising with this issue. Thousands of hydraulic rams made by this company are in use throughout the country.

Col. S. Brown Allen, proprietor of Hill Top Stock Farm, has an excellent offering of Berkshires in this issue.

The Laurel Refractory is offering some nice grade sows of Berkshire-Poland China cross.

The International Silo Co. is another new advertiser in this issue. They will be very pleased to quote prices, send circulars, etc., to interested parties.

Essex and Poland China pigs and Southdown sheep are offered by L. G. Jones. Look up his ad.

C. H. Staunton is advertising his prize winning S. C. Black Minorcas. He would like to send a circular to all interested in this splendid breed of fowls.

Ayrshire cattle can be had of the Melrose Farms, Casanova, Va.

Parties having wool to sell will be interested in the advertisement of the Wallerstein Produce Co.

We invite attention to the change in the ad of Morven Park on another page. Guernsey cattle, Yorkshire hogs, and Dorset sheep of the finest breeding are the offering this month.

Prof. J. R. Fain, Agriculturist of the Experiment Station at Blacksburg, is offering some choice young stock of several breeds.

The Sure Hatch Incubator Co. is making a special end-of-the-season offer in this issue.

The Johnston Harvester Co. has two striking advertisements in this number and we invite the attention of our readers to them.

Heebner & Sons start the season's

POTATO BUGS

Quickly and Surely
destroyed with

Paris Green

AND

Lime Compound

As Fine as Flour,
\$1.75 per bag or \$18 per ton.

BB

Everything for des-
troying plant-eat-
ing insects.

BB

T. C. ANDREWS & CO.,
NORFOLK, VA.

SAN JOSE SCALE

and other INSECTS killed by

GOOD'S

Caustic Potash Whale-Oil Soap No. 3

Endorsed by U. S. Dept. of Agri. and State Experiment
Stations. This caustic Potash Soap is as well as a insecti-
cide. Each keg, 25 lbs. 100 lbs. 250 lbs. 500 lbs. 1000 lbs.
\$20.00. \$40.00. \$75.00. \$125.00. \$200.00. Send for Booklet.
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\$100,000 offered for one in-
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Book, "How to Obtain a Patent"
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FOR EVERYTHING:
NEW OR SECOND-HAND;
SOLD OR RENTED.
Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.

THE BEST WAGON

For Every Variety of Use is the

"BROWN" WAGON

AND THESE ARE THE REASONS WHY



The "BROWN" principle increases its strength, durability and neat appearance.

We use Double Sliders for the coupling pole. The Tongue Chains have Coil Springs in them—makes them easy on the horse's neck. Seat Hooks locate themselves—can't get out of place, can't slip. Hot Oil-boiled Wheels—tires can't come off.

Machine Boxed Wheels—must be true. Machine Fit Skins—better than can be done by hand.

Have Extension Shoe Skin which fully protects axle—used only on THE "BROWN" WAGONS.

Branch Chains to tongue chains—can't whip horse's legs.

Besides all this it is stamped "BROWN," which is a guarantee of excellence and superiority.

All about styles and sizes in free circulars.

BROWN MFG. CO., ZANESVILLE, OHIO.

advertising with an attractive announcement on another page.

The National Tool Co. is offering a very handy combination tool at a reasonable price in an attractive advertisement in another column.

A. H. Reid is advertising cream separators, creamery and dairy supplies, etc. Look up his ad.

The Ohio Well Drilling outfit is offered by the Loomis Machinery Co.

The Simmons Hardware Co. has an attractive ad of their "Keen Cutter" tools, which are well known to numbers of our readers.

Jas. Leffel & Co., the well known engine and boiler makers, have an announcement on another page, to which we invite attention.

The Breeders' Gazette, the best live stock paper published anywhere, is advertising for agents.

Dederick's Hay Presses are offered our readers as usual this season.

The Osgood Scale Co. is advertising a new pitless scale. Better look up the ad.

Note the ad of the International Stock Food Co., answer the questions in it and get a copy of their splendid stock book free.

The Little Giant Hay Press Co. are after the trade of the farmers in this section as usual this season.

We invite attention to the advertisement of the Short-horn sale to be held in Bristol, Tenn., May 31st. This sale will be held under the auspices of the Southwest Virginia, Eastern Tennessee and Western Carolina Short-horn Breeders' Association. Some splendid stock can be had at this sale.

T. S. Cooper & Sons will hold their annual Memorial day sale of Jersey cattle at "Linden Grove," Coopersburg, Pa., May 30th. The sale this year will also include a few Percherons imported by Messrs. Cooper.

A NEW POTATO DIGGER.

On another page in this issue, will be found an advertisement of Messrs. D. Y. Hallock & Sons, York, Pa., giving a brief description of their "O. K. Elevator" Potato Digger. We invite special attention to this ad. as it will surely interest hundreds of our readers who grow potatoes. If there is a firm in the country that knows anything about Potato Diggers it is Hallock & Sons. They have made them for 20 years. This machine is their latest and they say, best. As it sells for such a small price, and can be had on such favorable terms, we feel sure that scores of our readers will be owners of a Digger before the season is over.

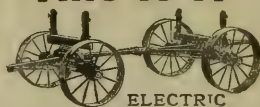
Darlington Co., S. C. 3-28-'05.

The SOUTHERN PLANTER is the most valuable paper for our Southern farmers that I know and I sincerely trust that your success is equal to its merits.

E. M. WILLIAMSON.

Mention THE SOUTHERN PLANTER in writing

THIS IS IT—



The wagon you are looking for; the wagon folks are all talking about. By every test it is the best—no living man can build a better. Of course you have guessed that it's the

ELECTRIC HANDY WAGON

Low steel wheels; wide tires and durability and good service written all over it. Don't be talked into buying an inferior. Get the wagon that lasts. Or we'll sell you a set of Electric Steel Wheels and make your old wagon new at slight expense. Spokes united with the hub; absolutely impossible to work loose. Sold on a money-back guarantee. The saving in time, labor, horse feed and repair bills will pay for them in a single year. More than a million and a quarter in use. All we ask is a chance to tell you more about them. Drop a line, we'll do the rest. Catalog free.



ELECTRIC WHEEL CO., Box 148 Quincy, Ill.

Clipper Lawn Mowers

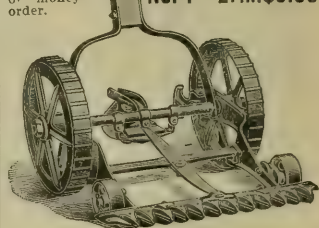
WILL cut short grass, tall grass and weeds. If your dealers have not them, here is the price. Send draft or money order.

No. 1—12 in. \$5.00

No. 2—15 in. \$6.00

No. 3—18 in. \$7.00

No. 4—21 in. \$8.00



CLIPPER LAWN MOWER CO. Dixon, Ill.



FOR SAMPLES AND CIRCULARS ADDRESS F. H. JACKSON & CO. Winchester, Ky. Agents Wanted.

SAVE THE POSTS.

Old field pine made to last longer than cedar or locust by creosoting with CREOLENE, a product of dead air. The creosoting of lumber makes it practically indestructible, stopping rots and killing all insects. Write for prices and particulars

NORFOLK CREOSOTING CO., Norfolk, Va.

..Second Hand Bags..

Wanted. Any kind, any quantity, anywhere. I pay the freight. GEO. T. KING, Richmond, Va.

HENCH'S 20th Century

Steel Ball Coupling Pivot Axle Cultivator with Double Row Corn Planter and Fertilizer Attach. Complete in One Machine.



Thousands in use. Mfrs. call kind of trial improvements. Agents wanted; write for circular.

The Hench & Dringgold Co., Mrs., York, Pa.

WE'LL PAY THE FREIGHT

and send 4 Heavy Wheels, Steel Tire on, \$7.25 with Rubber Tires, \$15.00, 1 mfg. wheels \$4 to 4 in. tread. Top Diggers, \$25.00; Hammers, \$2.50. Write for catalog. Learn how to buy direct. Repair Wheels \$3.50. Wagon Umbrella FREE. V BOOB, Cincinnati, O.

DID IT EVER OCCUR TO YOU

that an artesian well is the absolutely sure source of pure, clear, cool water

AND

that we make a specialty of drilling them and furnishing all kinds of Pumping and Water Supply Plants, Complete? Our long experience will put money in your pocket.

TANKS, PUMPS, WIND MILLS, Wood Saw Tables, RAMS.

Sydnor Pump & Well Co.,
(INCORPORATED.)
Box 949. Richmond, Va.

NEW PLAN FOR SELLING BUGGIES.

THE MODEL CARRIAGE & HARNESS CO.
MAKES A REMARKABLE ADVERTISING OFFER.

Every subscriber to this paper should read the new offer of The Model Carriage & Harness Co., 105 W. Sixth St., Cincinnati, Ohio.

They offer to send any vehicle of their manufacture to any reader of this paper on a \$1.00 good faith deposit, giving the privilege of a thorough inspection and if satisfactory, the privilege of trying the vehicle on their one full month's free trial plan before payment for it is sent to them. This special offer is good for a limited time only and anyone desiring to take advantage of one of the fairest and most liberal selling plans ever offered by any carriage manufacturer, would do well to write them at once for their complete 1905 catalogue, which shows buggies from \$35.00 up to their great leader buggy at \$42.50; driving wagons at equally low prices, all kinds of surreys, spring wagons and light pleasure vehicles. If you want to be there and get in on the ground floor and have your order shipped promptly, we would suggest your writing them at once, sending \$1.00 and have them send you their catalogue. If you do not find the kind of a buggy or vehicle you are looking for in their catalogue they will refund you \$1.00 to you.

By sending \$1.00 now you will get your name on their order book in advance of a great many others who will order later, and in this way insure prompt shipment.

The Model Carriage and Harness Co. are an old and well established carriage manufacturing concern and are selling the entire output of their large factory direct to the consumer at wholesale prices. They are not only making this wonderful, liberal offer, but are sending out with all of their Model Vehicles a two-year written guarantee, signed by an officer of their company, guaranteeing the purchaser fully for two years from date of sale on any defective material or workmanship in any of their vehicles.

Write for their catalogue to-day. They will send it to you free of charge, postage prepaid together with the full details of this liberal new plan for selling vehicles and harness.

"I would as soon try to keep horses without hay or oats as without Absorbine" writes Mr. L. Ellmaker, 34 N. Duane St., Lancaster, Pa. My remedies will be found in every well regulated stable. Absorbine, \$2.00 per bottle delivered; Kidney and Nerve Powders, 35c, a package postpaid. Rock free. W. F. Young, P. D. F. 169 Monmouth St., Springfield, Mass.

In writing mention Southern Planter

A Perfect Machine

The Reid Hand Separator is the best of its kind. It is built along the lines of the most perfect machine ever made. It is the only one of its kind that will separate the cream from the milk in the most perfect manner. It is the only one of its kind that will separate the cream from the milk in the most perfect manner. It is the only one of its kind that will separate the cream from the milk in the most perfect manner.



Reid Hand Separator

is guaranteed to do just what is claimed for it. It will separate the cream from the milk in the most perfect manner. It is the only one of its kind that will separate the cream from the milk in the most perfect manner.

A. H. REID CREAMERY & DAIRY SUPPLY CO.
Philadelphia.

Agents—Dean & Co., Minneapolis, Minn., and
Mower-Harwood Co., Cedar Rapids, Iowa.



BALED HAY

can be sent to the buyer at the right time. These bales are made by a new and improved machine.

DERICK'S CONTINUOUS BELT PRESS
is the best of its kind. It is the only one of its kind that will bale hay in the most perfect manner. It is the only one of its kind that will bale hay in the most perfect manner.

P. K. Dederick's Sons, 210 West St. Albany, N. Y.

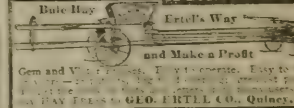
BALE YOUR OWN HAY.

MILLET SORGHUM PEAVINES ETC.
WITH "HANDY" BALER
THE STRONGEST MOST POWERFUL
SWIFTEST AND LIGHTEST
OPERATING HAND PRESS
EVER PUT ON THE MARKET.



**LITTLE GIANT
HAY PRESS CO.**
DALLAS, TEXAS.

BALES 15 TONS A DAY HAY



and Make a Profit
Gem and V. Co., 1111 Broadway, New York City.
GEO. E. FRETTE & CO., Quincy, Ill.

WHITMAN BALING PRESS

for sale, price, \$250. This is a splendid press, as its make indicates. Horse or steam power; size of bale 14x18, usual length. A bargain at above price. Address Box 555, Richmond, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

The Great OHIO Well Drill

Will drill faster and deeper with one horse power than any other machine. It will drill the hole in the ground in the most perfect manner. It is the only one of its kind that will drill the hole in the ground in the most perfect manner.

LOOMIS MACHINE CO.,
TIFFIN, OHIO.

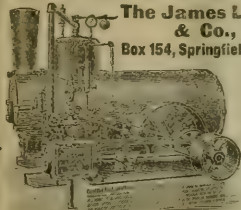
Leffel Engines

Simple, highly efficient, durable, are specially adapted to farm uses.

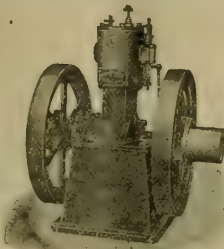


Widely known as the quickest, easiest steamers built. We make them Portable, Horizontal, Upright. Engines mounted on boilers or detached. No other style of power will give you such satisfactory service. We want to tell you the reasons why. We ask every Planter reader who wants a dependable power to write us today for our book, "Power Economy and Efficiency."

The James Leffel & Co.,
Box 154, Springfield, Ohio.



PALMER



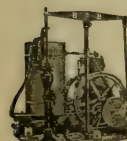
Gasoline engines. 3 horse power, \$100; 5 horse power, \$150; mounted wood sawing outfits with 3 horse engine, \$200; with 5 horse engine, \$250. Marine engines, pumping engines. Catalogue free. Agents wanted.

PALMER BROS, Cos Cob, Conn.
Philadelphia Office, Bourse Building.

Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 3 horse power, \$100; 5 H. P. double cylinder, \$200.

SOUTHERN MACHINE MANUFACTURING CO.,
731 E. Cary Street, Richmond, Va.



\$85

Will buy our 2 H. P. 4 Cycle Engine. Other sizes in proportion. Buy direct and save dealer's profit. Vertical, Horizontal and Portable Gasoline Engines, pumping outfits a specialty. Write for free circulars

BAUROTH BROS.,
Springfield, Ohio, 50-56 Fisher St., S.

ACCURACY IN WARFARE.

The Russo-Japanese war again strikingly exemplifies the absolute necessity of accurate shooting ability to successfully wage war. "To hit the mark" with telling effect is what the wily Japs have learned to do both on land and sea; to the rout and discomfort of their powerful yet bewildered antagonists.

The Boer war was another illustration of hitting the mark with a vengeance, as all will readily recall. The long range accuracy of the fighting Boers of the South African veldts was alone responsible for the prolongation of this bloody three years warfare, and made the signal victories of Colenso and Magerfontein possible.

"Learn to Shoot Straight" was the keynote of Secretary Root's valedictory to the War Department of our country just prior to his retirement from office. We don't want any wars, but we do want to be prepared for any possible emergencies, and it is with this commendable end in view that the progressive J. Stevens Arms and Tool Co., of Chicopee Falls, Mass., makers of the famous Stevens firearms, have been for months past teaching and preaching the art to shoot straight.

As a consequence, a revival in interest in target shooting has been fostered, and the boy on the farm equipped with a trusty Stevens rifle, is helping his father get rid of crop-destroying birds and beasts. He is incidentally becoming, too, a master of a very important accomplishment.

THE DEMING POWER SPRAYER.

Those of our readers who use or are intending to purchase power sprayers will be interested in the Gasoline Engine Spraying Machine manufactured by the Deming Company, Salem, Ohio. The Deming Company are old and well known manufacturers of all kinds of spraying devices. The power sprayer here reproduced is one of their later inventions. It meets admirably the requirements of those who must employ a power of some kind to spray their large trees and in their large field and orchard operations.

The engine is light, simple and self contained. The cylinder is water cooled; the water tank being in base of outfit. The water circulation is ideal. It has a strong electric spark igniter and improved dry batteries. The pump is of a style already proven one of the most effective in the Deming line. The whole outfit can be conveniently mounted on a wagon bed or tank wagon. Any style or size of supply tank can be used. Any one interested in power sprayers will do well to send to the Deming Company for their catalog and full particulars about this machine.

Write "Osgood" Binghampton, N. Y., about their "New Idea" ready to weigh "pitless Scale."

The Grampian



(Wheels Removed when in Use.)

Combined Land-Roller, Stalk-Chopper and Clod-Crusher.

THE DRY WEATHER MACHINE. Does all its name implies, and more. Fills a long-felt need of the farmer and truck gardener wherever the earth is cultivated, whatever the crop or character of soil. No longer an experiment—universally endorsed wherever introduced. Testimonials, full description and price on application. Open to proposals for its manufacture, and to purchase of State rights. JOHN K. GOODMAN, Mt. Ulla, N. C.

ARTESIAN WELL Contractors.

DEEP WELL DRILLING a specialty. Estimates made free of charge in all localities. If you want any work done write M. S. SCHAILL, Michaux, Va.

WANTED BOILER AND ENGINE

S to 12 H. P., on wheels. Address
T. O. SANDY, Burkeville, Va.

ENGINES; 13 Horse Traction \$250; 10 Horse Traction \$300; Boilers, Engines new and second hand from 4 to 100 Horse. Single saw mill \$125; Double mill \$150. Machinery of every description at one-third actual value.
D. CASEY, Springfield, Ohio.

SECOND HAND De Laval Separator

for sale, price \$35. This machine has been used but little. Baby No. 1 Disc type, capacity 300 pounds per hour. Address, Dr. W. M. LYNCH, R. F. D. 3, Alexandria, Va.

BARGAINS

NEW CHATHAM FAN, \$16. Second-hand "Humming Bird," No. 1 Laval Separator (best made), just been overhauled at factory, and good as new, \$50. If unsold at above prices, will consider best offers May 10th. MUST MOVE QUICK.
GEO. T. KING, Richmond, Va.

Make Your Own Fertilizer

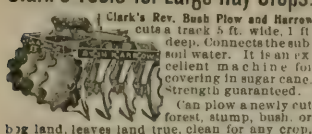
at Small Cost with

Wilson's Phosphate Mills



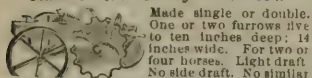
From 1 to 50 H. P. Also Bone Cutters, hand and power, for the poultry, fruit and feed mills. Graham Flour Hand Mills, Grind and Shell Mills. Send for catalogue. WILSON BROS., Sole Agents, Dept. D, Easton, Pa.

Clark's Tools for Large Hay Crops.



Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the sub soil water. It is an excellent machine for covering in sugar cane. Strength guaranteed. (Can plow a newly cut forest, stump, bush, or big land, leaves land true, clean for any crop.

Clark's Double Action Cutaway Harrow moves 15,000 tons of earth in a day.



Send for Circulars.
Clark's Rev. Sulky Disc Plow
Made single or double. One or two furrows live to ten inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar plow made. When Clark's grass tools are used as directed in his grass circular, we the C. H. Co. guarantee them to kill wild mustard, charlock, hardhack, sunflower, milkweed, morningglory, Russian thistle or any other low plant that grows, or money refunded. Now is the time to commence work for next year's seedling to grass.

THE CUTAWAY HARROW CO.,
Higginum, Ct., U. S. A.

SILOS

AND THE ONLY PATENT ROOF

The "Philadelphia."

Wood Tanks and Steel Structures
OF ALL SIZES.

E. F. SCHLICHTER,
1910 Market Street, PHILADELPHIA, PA.

Round Silos

Best preservers and practically everlasting. Easy to set up. Convenient to fill and feed out, not outspending when empty. Build once for all—cheapest in the end. We want live agents everywhere. Special terms to granges and clubs. INTERNATIONAL SILO CO., Ches. St., Jefferson, Ohio.

Excelsior Swing Stanchion,

Warranted the best. 30 Days' Trial.
Can be returned at our expense
if not satisfactory.

THE WASSON STANCHION CO.,
Box 600. Cuba, New York.

WARRINER'S CHAIN HANGING STANCHION

CLEAN, SAFE, DURABLE AND COMFORTABLE

WALLACE B. CRUMB, FORESTVILLE, CONN.
P. O. BOX 448

MAKES SUCCESS SURE.

The following is a letter recently received by Dr. John Haas, of Indianapolis, Ind., and which is only one out of many of the same kind that are received by him daily:

I must tell you that my hogs are doing fine. No cholera on the farm. This means success. I have lost only three pigs out of a herd of 300 hogs this year and this loss is almost too insignificant to mention. I now have the most good pigs I have ever had on my farm, all of them being healthy, strong, vigorous and growthy. I attribute my splendid success to the regular use of your Remedy for the past eight years and consider the results wonderful. My advice to swine raisers is to keep their hogs well by using it. I shall continue to be a patron of it as I have found it very useful. The hog pen is the farmer's gold mine if he will properly operate it and this he can do if he will feed your Remedy and follow the advice given in your book, "Hogology."

JOHN H. MATHEWS.

Yates City, Ill.

ENTERPRISE IS ESSENTIAL TO SUCCESS.

Those who would succeed and meet the competition of the present times must certainly ever be on the alert for up-to-date methods. New things are constantly coming up to increase profits and lessen labor, and that is what all those engaged in any pursuit are desirous of obtaining. For many years past, water has been the principal conveyor used in spraying, and all know what an amount of labor that entails, whether perhaps a barrel of water for the simple purpose of finely distributing a few pounds of poison, whereas later methods use a dry lime as a conveyor, and a little machine called the Champion distributes it when mixed with a proper poison in a fine smoke-like powder, and in a tobacco or potato field, or on tomatoes, a man can walk along rapidly, carrying one of these implements, which weighs but little, and destroy the worms or bugs in short order. In many sections blight is a serious matter, particularly on potatoes and tomatoes. There is now a Dry Bordeaux made, which this machine distributes, and the result is said to be wonderful. We have just been looking over a little Spray Calendar, which contains much of interest, and anyone may obtain it by simply sending a postal to Leggett & Brother, 301 Pearl St., New York. We are sure its perusal will prove profitable.

Washington, D. C., 4-14-'05.

I would not be without your valuable paper as I find much of value and profit in every issue.

J. A. FLEMING.

MASTERS
Rapid Plant Setter

SETS

Tomatoes
Cabbage
Tobacco

Sweet Potatoes, Etc.

Does better work than can be done by hand, and twice as fast.

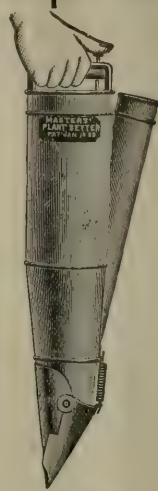
TWO BARRELS
of water per acre
with this setter will
produce

SURE WORK
AND

BEST RESULTS

Price, \$3.75 each.
Express charges pre-
paid to your sta-
tion. Write for par-
ticulars, testimon-
ials, wholesale prices
etc.

MASTERS
PLANTER CO.,
Chicago, Ill.



WHAT IS IT?

MEDICATED
CHICKEN
TARRED
FABRIC.

Piece 6 inches square
in chickens' nest
keeps them healthy,
free from lice and
makes them lay.

Makes a good roof.
Being obnoxious to
vermin, is highly re-
commended for lining
Dog Kennels, Nurse-
ries, Hennesies, Rab-
bit Houses, Pigeon
Houses, etc. Can be
painted or whitewash-
ed. Put up in 500
square feet rolls, \$1.50
per roll. We pay freight. For 25 cts. stamps
or currency will mail 9 square feet and \$250
dog ring puzzle. Write at once. For sale
by all merchants or direct from manufacturers.
RICHMOND, VA.

WESTOVER PAPER CO., Department
9, Richmond, Va.

PRINTING DONE

at the following prices:

Envelopes	100.	500.	1,000.
Letter Heads	30c.	\$1.00	\$1.50
Note Heads	40c.	1.25	2.00
Bill Heads	35c.	1.10	1.75
Cards	35c.	1.10	1.75
		1.10	1.75

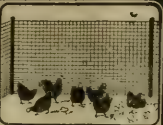
Send cash with order.

STAR PRINTING CO., Millboro Springs, Va.

HAD TETTER 52 YEARS.

B. H. Tatner, McDonald Mills, Ga., writes: "Tetterine is the only remedy I ever sold that would cure tetter so it would not return. Sold 6 dozen boxes in a year and guaranteed every box. I have never had to return the money for a single box. I sold a box to a man who had had tetter for 52 years; 2 boxes cured him sound and well." 50 cts. a box at druggists, or from J. T. Shuptrine, Manufacturer, Savannah, Ga.
Bathes with Tetterine Soap, 25c. cake.

Union Lock Poultry Fencing



PICKETS LOCKED IN CABLES

Can't slip, but stretches perfectly to fit uneven ground. Five pickets at bottom for little chicks. High as you want; 1 to 7 ft. A poultry fence for all fowls that does not sag.

We sell direct to Farmers and Poultrymen.
Prompt Shipments at Factory Prices.
 Mills in Connecticut, Illinois, California. Write for catalogue.

CASE BROS., 28 Main St., Colchester, Conn.

HARD STEEL

WIRE - FENCE

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip Lock. In strength, appearance and durability, the Hard Steel can not be excelled. Write for catalogue and prices.

THE HARD STEEL FENCE CO., Cuyahoga Falls, O.

TRUSS AND CABLE

Built Like a Board Fence

No experience or special tools required. Ask for free sample and full particulars.

Truss & Cable Fence Co., 82 Dean Ave., Cleveland, O.

Farmers Attention!

TWO-PLY ROOFING PAPER—"Fresh," 55 cents per square. You need it. Poultry Wire at 3c yard. Makes a good fence. Mail your orders. Tell us your wants. We are here to serve you the best, at the lowest price.

HARRIS HARDWARE CO., 409 E. Broad street, Richmond, Va.

Good Fences Make Good Neighbors

"Jones" Spiral Spring Wire fences are reliable through and through. Build over hill and through hollows as well as on level ground. Easy to put up. Write for catalogue No. 3.

International Fence Co., 98 Buttes-Ave., Columbus, O.

YOU CAN'T AFFORD NOT TO BUY POULTRY FENCING WITHOUT INVESTIGATING THE PAGE. It is made of larger, stronger coiled spring wire, heavily galvanized, with bottom spaces only 1 1/2 inches, requires fewer posts, no boards, looks better and lasts much longer.

PAGE WOVEN WIRE FENCE CO., Box 5153, Adrian, Mich.

DOW FARM FENCE

PRICE AND QUALITY WILL PLEASE YOU—WRITE US NOW.

•DOW-WIRE WORKS—LOUISVILLE, KY.

STUMP PULLERS
SEVEN SIZES
\$17.50 UP

WE PAY THE FREIGHT CATALOG FREE

DEPT. P.W. SMITH CRUBBER CO. LACROSSE WIS.

Mention THE SOUTHERN PLANTER in writing.

THE FONTAINE SHOCK BINDER.

We invite attention to the ad of The Fontaine Co., Christie, Va., to be found elsewhere in this issue. This company is offering a most useful labor saving device in the shape of a shock binder. In addition to preventing corn shocks from falling or being blown down, this binder can be very handily used in stacking small grain by drawing a rope around the base of the stack, so that it will not spread while the stack is being finished. A plow line or other small rope will answer the purpose.

Look up the ad and send for an illustrated pamphlet.

CHOICE ABERDEEN ANGUS CATTLE.

We are in receipt of a little folder from the Forest Home Farms, Milton, Ind., giving descriptions and pedigrees of the famous sires at the establishment. The proprietors of this farm, Mess. Jno. T. and G. B. Manlove, who are also proprietors of the Manlove self-opening gate, will be very pleased to answer any questions, quote prices or show visitors their splendid herd of "Doddies." Look up their ad.

The Hook-Hardie Co., of Hudson, Mich., are issuing a valuable little booklet on spraying which should be in the possession of every farmer and fruit grower, who takes a pride in producing a high grade of fruit and desires to increase the yield of his orchard.

This booklet contains much valuable information regarding the San Jose scale, Codling Moth and other pests which prove so disastrous to orchards, and shows the best methods to adopt in exterminating and preventing the growth of these ravaging insects. It contains many valuable formulas for spraying mixtures and quotes the best authority on when and how spraying should be conducted to attain the best results. By a careful study of this little book you will have no difficulty in recognizing at once, any insect or disease that may have attacked your fruit and will have at hand, a plan for an effective campaign against the pest.

This booklet contains as well, a description of the many styles of spraying outfits manufactured by the Hook-Hardie Co. and they manufacture every form of spraying device from hand to power sprayers, with all the necessary accessories. This season they are manufacturing a large power sprayer which is a decided improvement on any machine of this kind ever before placed on the market.

Write for their booklet at once. It costs you nothing, and will aid you in selecting an outfit suitable for your work. Address the Hook-Hardie Company, Hudson, Mich.

Men Who Shave

run big risk in using anything but the best shaving soap. That's the popular

WILLIAMS' SHAVING SOAP


Sold everywhere. Free trial sample for 2-cent stamp. Write for "The Shavers Guide and How to Dress Correctly."

The J. B. Williams Co., Glastonbury, Conn.

TRUNKS.

.. NEW IDEA...

PATENTED



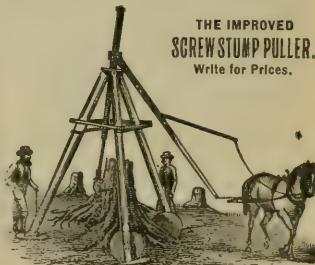
THE END ROLLING TRAY WALL TRUNK

Most convenient TRUNK for use in your home, as you have no heavy top to lift. ITS TOP CLOSES TO THE WALL, yet the top does not strike wall when up. You do not have to pull it away from the wall to open it. No heavy tray to lift out, as it runs on rollers, and is moved easily. Built strong for travelling. You can buy one direct from our factory at one-third less than you can get same quality elsewhere.

OUR LEADER, in 34 inch size, either round or flat top, ONLY \$5. Same TRUNK made in higher grades. MONEY CHEERFULLY REFUNDED if you are not more than pleased. Our guarantee in our large illustrated list thoroughly explains all. Write for list No. 5 and return mail will bring it. H. D. THACKER & CO., Sole Manufacturers, Petersburg, Va. Established 1894.

THE IMPROVED SCREW STUMP PULLER.

Write for Prices.



Chamberlin M'G Co., Olean, N. Y., U. S. A.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

No good grocer sells a lamp-chim- ney without MACBETH on it

You need to know how to manage your lamps to have comfort with them at small cost. Better read my Index; I send it free.

MACBETH, Pittsburgh.

MONEY SAVED

DO YOU EVER INTEND TO BUY A PIANO? If so, read this and buy now. Never before have you had as fine an opportunity to buy a fine piano at such a great sacrifice of price. We are to take inventory and must reduce our immense stock. Here is your life's chance. Look at these prices:

A fine \$500 upright.....\$345
A fine \$450 upright.....\$325.50
A fine \$400 upright.....\$295
A fine \$350 upright.....\$225

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FARMING ON THE EASTERN SHORE.

It was a happy thought on the part of the Hon. J. H. C. Beverley, president of the State Board of Agriculture, to hold a series of Farmers' Institutes in the Peninsula and in Mathews and Gloucester counties, lying south of the Rappahannock and north of York river. Five meetings were held in all, namely, at Eastville, in Northampton county, at Onley, and Hallwood, in Accomac county, and at Mathews and Gloucester Courthouses. The attendance on these meetings was good, and the farmers showed an interest in all that was said that was unusual, though particularly gratifying to the speakers.

Addresses were delivered at these meetings by Prof. R. J. Davidson on the subject of Commercial Fertilizers, and by the writer on Soil Inoculation and Drainage. Unfortunately, the extremely bad weather prevented Mr. Beverley from being present, much to the regret of all. The addresses were well received, and the interest shown was evidenced by the large number of questions fired at the speakers. This shows that the farmers of this section of Virginia are alive to their best interests and are anxious to get in touch with the latest scientific facts relative to farming. At each of the places mentioned resolutions were passed asking that Institutes be held there within the coming year, and that two days' meetings be provided for in order that illustrated lectures on agricultural education and other subjects in which the farmers are interested might be given. It is to be hoped that Mr. Beverley will see his way clear to comply with these requests, for it is hard to see how the State Board of Agriculture can spend its money to better advantage than through traveling schools of information for the farmers, and that is exactly what a Farmers' Institute, properly conducted, amounts to!

An effort was made at each one of the places mentioned to effect a permanent organization that the Institute spirit might be carried forward and a nucleus for next year provided. Mr. W. L. Elzey, of Exmore, and Mr. Stanley Scott, of Eastville, were elected president and secretary, respectively, of the Northampton county Institute; Mr. W. A. Burton, of Onley, and Mr. W. H. Hatton, of Melfa, were elected president and secretary, respectively, of the meeting at Onley; while Mr. Martin Hall, of Horsey, and Mr. Frank Tule, of Assawoman, were elected president and secretary, respectively, of the meeting at Hallwood; these last two meetings being held in Accomac county. Mr. Alex. James, of Mathews, and Mr. Percival Hicks, of North, were elected president and secretary of the Institute at Mathews, and Mr. J. D. Stubbs, of Sassafras, and Mr. Percival Hicks, of North, were elected president and secretary, respectively, of the

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Institute at Gloucester. All of these gentlemen are progressive citizens of the several counties mentioned, and will no doubt take an active part in preserving the Institute spirit and organizing meetings for next year in their respective counties.

It may not be out of place at this time to make some observations of the conditions noticed in this section of the State. The opportunities observed were many and remarkable. Farmers in that section of Virginia have much to be thankful for, though of course they have to contend with some serious drawbacks. The soil is certainly of a genial character, the climate is admirable, markets are easily available by boat, and in some instances by rail, and the scenery and natural surroundings are, to say the least, inspiring. Some of the residents of that section may wish to take issue with the writer when speaking of the genial soil, but from observation and a careful study of local conditions, it seems evident that the soils that have been depleted and are in bad condition respond marvellously well to good treatment, and can soon be brought under profitable cultivation, though they have in many instances been subjected to outrageous treatment for more than a century. In proof of this, it is only necessary to mention the experience of one farmer in Mathews county, who said that when he purchased his farm two barrels of corn was the most he could raise per acre, and now he raises from ten to twelve, and wants to raise fifteen or more. He has been able to bring about this result in ten years of careful, intelligent farming, and it is pleasant to know that he is following scientific methods and is a close reader of experiment station bulletins and good agricultural papers.

The oyster industry is, of course, one of concern to the farmers of this entire region, and it is justly so, for when carefully conducted it is a profitable business. One farmer told me that he grew only the choicest oysters, and that he ceases shipping when the price falls below \$5 per barrel. Think of that, and yet a great many farmers say there is nothing in oysters. Another man told of planting 1,800 bushels of shells and taking out 4,700 bushels of oysters within eighteen months. It is said that the oyster will mature in a single season in the center of York river because food is so abundant. Oystering will certainly be more profitable in the future than in the past because of the immense demands the large and growing cities will make, and the industry should be fostered and protected in every way.

But there is no reason why the oyster farmers in all this region should neglect their farming interests when they have five or six months of the year at their disposal. They would be happier and more prosperous if they would give closer attention to

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No. 40.—133 acres; one mile from town, on fine Meadum road. Nice 7 room house, 3 porches. Good well and springs. Good barn with stalls for 10 cows and 5 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land sandy loam and clay. Two acres in orchard; trees in full bearing. Price, \$6,000.

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No. 47.—100 acres; 2 1-2 miles from railroad; 90 acres cleared, all level and in fine state of cultivation. New 5 room house. Stable for 4 horses and 6 cows. Young orchard. Good well at house. Situated on popular dirt pike, in Loudoun county. Price, \$2,500.

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the cultivation of the land, which they can well afford to do, because it will insure them a good living, and at the same time allow them to fatten their bantams, accounts on the profits from the oyster business, which are now too frequently swallowed up during the "off season" because enough pork, beef, butter and the general necessities of life are not produced on the land. Time is undoubtedly needed on much of the land which has been cultivated for a long time, and then clover and a great variety of legumes, which have the power of assimilating atmospheric nitrogen, can be used in the form of hay to nourish stock, grazed off with hogs, or turned under to add vegetable matter and nitrogen to the soil.

There was much complaint of the roads during our visit. To one used to the beautiful (?), deep, red clay roads, where the wheels sink in during wet weather until the axle scrapes over the surface, the sandy roads of all this district seemed almost ideal. In most places a good ditch along the side and a well rounded-up center would insure good roads at practically all seasons of the year throughout this entire region. Would that roads of equal quality could be gotten as easily in all sections of the State.

The interest in soil inoculation and green manuring was natural, for leguminous crops form the backbone of agriculture in this region for reasons stated above, and judging from what the farmers said, much of the trouble experienced by them in growing alfalfa and various other crops is due to the need of soil inoculation. It was therefore a special pleasure to the writer to be able to inform the farmers of this district that the Experiment Station is in position to furnish them with inoculating material at the cost of putting up and mailing out. A number of farmers reported some success with alfalfa, and it undoubtedly will grow well over a large part of this section of the State of the soil is properly prepared. It will certainly be a boon, for hay was found to be selling at \$15 a ton and higher in some instances, and much of it imported into the district. This is all a mistake, and is unnecessary and the farmers of Tidewater cannot afford, with the soil and climatic conditions they enjoy, to buy hay in the future.

Some of the bad practices observed, which can, and no doubt will be remedied in the future, are a failure to rotate crops, a strong belief in shallow plowing, and a failure to properly appreciate the advantages of stock raising. It is believed by some farmers, very happily not by all, that stock growing cannot be made a success, and certain forms of it would probably never prove profitable. Draft horses and heavy grades of beef cattle will hardly do as well as some of the lighter and more active breeds of beef and dairy cattle and the trotting and Hackney types of horses. Shallow plow-

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ing is a curse to the community, but those who will deepen their soil will reap the harvest in due time, and others will learn through hard experience.

There seemed to be a general belief that drainage was necessary throughout the entire region. To a certain extent this is well founded, but surface drainage is about all that can be practiced with efficiency, owing to the level nature of the land. Large, deep open ditches placed at proper distances will carry off the surface water to advantage in most places, and as the soil is sandy in nature, tile draining will not often have to be resorted to, and in most instances cannot be used to advantage, as sufficient fall is not available to insure a proper outlet.

Altogether, agricultural conditions in this section of the State looked bright to the writer. Accomac and Northampton counties now enjoy the reputation of producing a superior grade of sweet and Irish potatoes. The industry is even yet in its infancy, and it will no doubt extend to the mainland, where soil and climatic conditions are very similar. The farmers should give more attention to the selection of their seed potatoes, and grow them for themselves, and not depend so much on bringing in fresh supplies from year to year. They need to use leguminous crops more and save on their fertilizer bills, particularly the nitrogenous elements. They will no doubt give more attention now to the home-mixing of fertilizers, which will be to their decided advantage.

The interest taken in everything pertaining to agricultural information by the farmers in this section is the best and surest evidence of the progress the country is destined to make in the near future. I was told by residents that it is only a few years since the great potato growing industry of the Peninsula started, and it has certainly now developed into an enormous business, thanks to the efficiency and excellence of the Truckers' Exchange, whose headquarters are at Onley. This is an example of agricultural co-operation familiar to the readers of Virginia papers, and therefore will not be enlarged on at this time, except that it is proper to express the hope that it may be imitated in many other sections of the country, as could be done to the material advantage of the tillers of the soil.

The trip was quite interesting, and gave proof of the fact that the farmers of the State are appreciative of the efforts of the Experiment Station, and that they are anxious to learn all there is to know about farming, and that they will take care of the future if they are wisely and judiciously advised and encouraged.

ANDREW M. SOULE,
Dean and Director,
Virginia Experiment Station.

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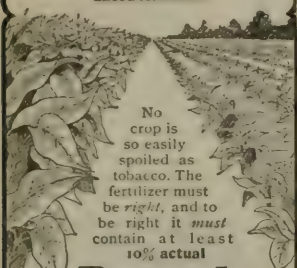
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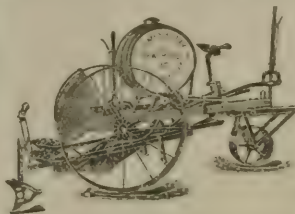
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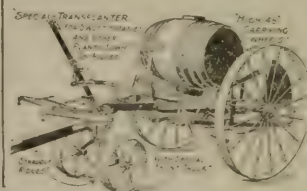
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SOUTHERN POETS. ARTICLE No. 4.

MARY WASHINGTON.

Louisiana has shown a rich vein of literary talent in poetry as well as in other fields. During the first half of the 19th century, she had several poets of marked merit, but they are far less known than they deserve to be, owing to the fact that they wrote mostly in French, and their modes of thought and feeling were French, as well as their language, hence the literary and reading world, in other parts of the United States, with Anglo-Saxon structure of mind, could not come into full sympathy with these Franco-American poets. In proportion, however, as French influences have weakened, and American strengthened in Louisiana, the line of demarcation between her and the other States has worn away, and now her literary products circulate as widely and meet with as high an appreciation as those of any other section.

Amongst the prominent, old time poets of Louisiana, we may mention Adrian Roquette, who was born in New Orleans, but was educated in France, and prepared for the law. He soon gave up this calling, however, to take ecclesiastical orders, and became a priest attached as chaplain to the Catholic Seminary of New Orleans.

He wrote both in English and French and wrote well in both. He made his debut as a poet by a volume of poems published simultaneously in Paris and New Orleans, 1841, and entitled, "Les Savanes. Poesies Americaines." It was cordially received in France and highly praised even by the critical and fastidious St. Beuve. "I have taken great pleasure," said he, "in breathing in your 'Savanes,' all sorts of perfumes full of youth and freedom." Augusta Brizeau, the famous rural bard of Bretagne, saluted him in these words, "You are the bard of Louisiana, but France must claim you, too, and give you a place among her poets." Some of his French admirers went so far as to style him, "The Lamartine of America." It is not to the credit of American discrimination that this country should have done so little honor to one so cordially greeted in France.

In 1848, he published a volume of sacred poems, entitled "Fleurs Sauvages," but they did not enhance his reputation. The term "sacrees," applied to poems, frightened off most readers.

In July, 1860, in the early stages of the firmament that led to the civil war, he published a volume entitled, "Poemes Patriotiques."

In this country the best known and most appreciated of his poems in French is "Souvenir de Kentucky."

Placide Canonge was a man of even more marked talent than Roquette, he being a true poet and also a fine dramatist. He was born in New Orleans in 1822, of noble descent, being the son of Judge Canonge, of Louisi-

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S. C. B. Leghorn

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ana, a man of great legal abilities, eloquence, wit and classic culture.

Placide was educated in Paris, and his tastes and ideas in literature were formed upon those of the romantic school of which Hugo, Dumas and Lamartine were the exponents, and from them and other men of their kind, he imbibed his literary character, and his radical views and republicanism. On his return to Louisiana he found a great struggle going on between the French and English tongues, attempts being made to banish the former from the courts, schools, business and society, but that generation was not prepared for such stringent measures. Louisiana had too newly passed from under French domination to be ready for so radical a change, and Canonge, with numbers of his countrymen, preferred to retain the French language for his own.

The drama was his chosen field, although he did well in others also. The following is a list of his dramatic works:

"Le Mandit Passport," (Vaudeville).
"Gaston de St. Elvire," (Tragedy).
"L'Ambassadeur d' Autriche," (Drama).

"Un Grand d' Espagne."
"France et Espagne."
"Comte de Monte Cristo."
"Carmagnola."

"Qui perd, gagne," (Comedy).
He was the Sheridan of his day and all of his plays have been produced in New Orleans with well merited applause. Several of them have been produced in Paris, and "Carmagnole" proved especially popular, running 100 nights. He was not only a fine dramatist, but an excellent actor, and appeared not infrequently in this capacity on the New Orleans stage, personating his own heroes. He wrote the text for Mrs. Murphy's opera, "Louise de Lorraine."

He wrote enough lyrics to make up a volume of real gems. "La Brise du Sud" is one of the best known of these. He also contributed largely to journalism, and edited several weeklies. He was a true poet whose verses gushed from his heart, and whose diction was brilliant and beautiful, and he devoted his whole life and genius to poetry and the drama. His writing in French is probably the reason that his works have not been more generally read and appreciated amongst our people.

Amongst the poets of Louisiana, I may also mention Charles Dumry, although he is better known as a writer of interesting and powerful tales. His best known poems are, "Farewell ma mie, since we must part," "Viva Italia" and "Who shall be our Standard bearer?" The latter I need scarcely say, was written during the Civil War.

Dr. Wm. H. Holcomb, a resident of New Orleans though a native of Virginia, also wrote a volume of poems which he published at an inauspicious

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Eggs-Eggs-Eggs!

Just to advertise our stock we offer 15 of our famous B. P. Rock eggs from Bradley prize stock for \$2.00, (worth \$6.00). Also 15 S. C. B. Leghorn eggs for \$1.50. Bred for utility and beauty.



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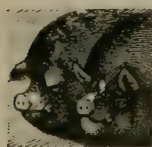
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time, in 1861, just at the breaking out of the war, and in the great excitement and turmoil prevailing then, his poems failed to meet with the recognition which they no doubt merited.

Harry Lynden Flash was born in 1836, in the West Indies, but he was of English descent, coming of the celebrated Wilberforce family. He was brought to the United States in his early life, residing first in New Orleans and later in Mobile. In 1857, he spent a year in Europe. In 1860, he published his first volume of poems, 61 lyrics, and an experienced critic pronounced it "the best fresh volume of poems ever published in America." But in the convulsion the nation was then undergoing, this volume failed to receive the notice it would have gained at a more opportune time.

Flash's name seems typical of his nature, he being remarkably quick and possessing almost too great facility in composition, inasmuch as it prevented him from feeling the need of making much exertion. He possessed also ideality and warmth and delicacy of feeling. Perhaps his most striking poems are two short, detached ones, published in some periodical, "Love and Wrong," a poem of three stanzas, and "Who Can Tell?" a little poem full of passionate earnestness and Catholic charity. Amongst his other poems that have attracted attention and admiration I might mention, "At the Theatre," "The Duke of the Old Regime," "The Maid I Love," and "What She Brought Me." Mr. Flash wrote a good many Confederate poems, as for instance a tribute to Jackson, to Zollicoffer and to Polk. As a specimen of his style, I will subjoin one of his poems.

"WHAT SHE BROUGHT ME."

This faded flower that you see
Was given me a year ago.
By one whose little dainty hand,
Is whiter than the snow.

"Her eyes are blue as violets,
And she's a blonde and very fair,
And sunset tints are not as bright
As is her golden hair."

And there are roses in her cheeks
That come and go like living things,
Her voice is softer than the brooks
That flow from living springs."

She gave it me with downcast eyes,
And rosy flushes on the cheek,
That told of tender thoughts her
tongue

Had never learned to speak.

The fitting words had just been said,
And she was mine as long as life,
I gently laid the flowers aside
And kissed my blushing wife."

She took it up with earnest look,
And said, "Oh prize the flower."
And tender tears were in her eyes,
"It is my only dower."



Southdown Lambs. Essex and Poland-China Pigs.

I have on hand some fine Essex pigs (sows only, 8 weeks old) ready for delivery by May 10th; also a few Poland China pigs for June delivery. Southdowns for June and July delivery. Your orders solicited. L. G. JONES, R. F. D. 1, Tobaccoville, N. C.

POLAND-CHINAS

with the BUSINESS HAMS.

Large, mellow, easy keepers. Bred right and sure to please. SUNSHINE, U. S., PERFECTED and TECUMSEH blood. A few Spring pigs of both sexes, eligible to registry, for sale. M. B. Turkey eggs, \$2 per dozen. A. GRAHAM & SONS, Overton, Albemarle county, Va.

Duroc Jersey Pigs

from prize winning stock, at farmer's prices. Write for list. LESLIE D. KLINE, Va. clause, Va.

SALT POND HERD

Duroc Jerseys

PAUL J. 21255, heads the herd, with such sows as LILLIE'S PET, 40434, BELLE OF SALT POND, 70464, and LADY OF VIRGINIA, 70466. Young stock for sale. S. A. WHITTAKER, Hopside, Va.

Registered P. China

C. Whites Large strain All ages mated not akin, 8 week pigs. Bred sows, Service boars, Guernsey calves, Scotch Collie pups and Poultry. Write for prices and free circulars. G. F. HAMILTON, Cochrantville, Chester Co., Pa.



IMPROVED CHESTER WHITES.

I am now booking orders for spring pigs at reasonable prices. I will also sell S. L. Wyandotte and Black Langshan Eggs at \$1 per sitting of 15; two sittings, \$1.75, or three for \$2.50. Address A. J. LEGG, Albion, V. Va.

Chester White Hogs,

Best hog on earth at farmer's prices. S. M. WISECARVER, Rustburg, Va.

REGISTERED

Angora Goats

for sale, at a bargain. Write for prices to

J. J. HERDT,
Rio, Va.

Angora Goats...

"The Wealth of the Wilderness." A 32 page pamphlet, by Geo. Edward Allen. Price, 10c. It's worth it.

THE SOUTHERN PLANTER, Richmond, Va.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big City, Ky.



Scotch Collies

Bred close to imported stock, and from families which have a fine show-yard record. Parents of pups are trained drivers. Pedigree sent with each pup sold. HIGHLAND STOCK FARM, Wittens Mills, Tazewell Co., Va.

Scotch Collies

Champion blood of England and America. Puppies now ready to ship. Also bitches in whelp for sale. FARMVILLE COLLIE KENNELS, Farmville, Va.

COLLIE PUPS

By Imported Sires. Sable and white and tri colors. Prices, \$8 to \$15. Older ones correspondingly low. Book on Training, 50 cents: FREE if you buy a Collie.

MAPLEMONT STOCK FARM, Rutland, Vermont.

—35 PURE BRED—

ENGLISH FOX HOUND

Pups 3 to 6 months old. Poland China Pigs. 30.8. C. B. Lehigh Eggs \$1.00, 100 for \$3.25. B. and W. P. Rock eggs at \$1.00 per 15. J. D. STODGHILL, Shelbyville, Ky.

HACKNEY STALLION, PATRICK HENRY

Chestnut horse, foaled 1902, 15.3 hands, weight 1150 pounds. Sired by Squire Rickel, by Cadet, dam Margery, by Rosebery. For terms apply to ANDREW POLLARD, R. F. D. 5, Richmond, Va.

Horses boarded winter or summer. Horses fitted for market or show, colts broken.

PRINCE LEO, (Stallion) FOR SALE.

The standard trotting bred and handsome individual PRINCE LEO, by Red Leo (2.26%); Prince Rene, dam of Queen Bird (2.29%)—tracing six times to Hambletonian, ten and five times to Mambrino Patchen. Address J. P. LUCK, Bedford City, Va., R. F. D. No. 4.

Stock For Sale.

7½ and 15-16 GRADE ANGUS Bull and Heifer Calves, \$25.00 to \$30.00 each.

1 BULL CALF out of Shorthorn Cow, by Angus Bull, \$25.00.

1 pair of BROWN GELDINGS, coming four years, well matched, well broken and well grown for their age, a first class allround farm and driving team, perfectly reliable, price \$300.

Several fine family milk cows, fresh, price \$50.00 to \$60.00 each.

WHITE PLYMOUTH ROCK and SILVER LACED WYANDOTTIE eggs, \$1.00 for 15.

W. M. WATKINS & SONS, Saxe, Va.

SOME FACTS ABOUT MRS. DREW, THE ACTRESS.

Mrs. Drew had a way of putting up for a long time with things that she felt should be remedied; but, little by little, as her patience ebbed, her silence would become more pronounced, like the lull before a storm; then, some day, upon arriving at the theatre, she would walk into the box office and don a certain red Paisley shawl which she kept in reserve as one of the most impressive pieces of stage property in the house. It fittingly reflected her mood. So long as that shawl was in evidence, all the people of the Arch, from stage carpenter to leading man, realized that perfection in the performance of duty was the smallest return they could give for their salaries.

I think I have conveyed the impression that Mrs. Drew was a woman with whom no one ever ventured on a familiarity that was undue. But Matt Snyder was a cheerful, jubilant exception to the rest of the company. Snyder was a clever actor, with one of the shrewdest and aptest wits possessed by any comedian of his day. He had too the habit of tardiness to a pronounced degree. If there was a virtue on which Mrs. Drew particularly insisted, it was punctuality. Her rule of promptness, the company knew, was to be as rigidly kept as the early Puritans kept the Blue Laws. We had been called for rehearsal one Sunday morning and we waited a half hour before Snyder came in, brisk and smiling.

His only warning of the tempest that was brewing was the fitful flare from Mrs. Drew's shawl as she paced back and forth among the shadows. She let him reach the center of the group. Drawing her form up to its full height, she observed, in her most majestic tones:

"I am very sorry, Mr. Snyder, that we must part."

With all the anguish of the separation depicted on his face, Snyder leaned forward and, with sobs in his voice, exclaimed:

"Why, Louise, you're not going to leave us?"

For the space of a second nobody breathed. We instinctively looked at the Duchess. Just for an instant her scintillating eyes looked back into his, that seemed almost fearful in their solicitude. The corners of her mouth twitched. Then, drawing the red shawl closely about her shoulders, she gave the order with the rehearsal.—Lippincott's.

Norfolk Co., Va., 4-1-05.

I do not like to be without the SOUTHERN PLANTER

ALIX. MCGREGOR.

Charteret Co., N. C., 4-2-05.

I do not see how I can get along without the SOUTHERN PLANTER.

J. L. BARROW.

... The Best Bargains in ...

Percheron Fillies,

Already stunted to the horse.

Short Horn Cows

Safe in Calf.

—AND—

Berkshire Sows,

all good individuals of the best breeding.

Come to the farm and secure a foundation herd at figures that will make you a profitable investment. JOHN F. LEWIS, Lynnwood Stock Farm, Lynnwood, Va.

PLEASANT VALLEY STOCK FARM

Shorthorn

calves from fine milking stock.

Yorkshire Pigs

of prolific breed.

JAMES M. HOGE, Hamilton, Va.

ELLERSLIE FARM

Thoroughbred Horses

AND SHORTHORN CATTLE,

Pure Southdown Sheep

and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON, CHARLOTTESVILLE, VA.

MEADOW BROOK

SHORT HORNS

For sale at Farmers' prices 1 2-year-old Red Bull, 1 yearling Red Bull, 1 yearling Roan Bull. C. A. SAUNDERS, Meadow Brook Stock Farm, Culpeper, Va.

Red Poll Bull

Calf, 9 mos. old, entitled to registration, for sale cheap considering his quality.

F. E. WILLIAMS, M. D., Charlottesville, Va.

8 REGISTERED

Ayrshire Bulls

from one to eleven months old, for sale.

If you want a bargain, write at once to MELROSE FARMS, Casanova, Va.

No Lice

Where Gibson's Liquid and Powder is used. Kills all lice on Poultry and Stock instantly. Easily applied, your money refunded if it fails.

Write for prices,
GIBSON & LAMB,

Box 128. West Alexander, Pa.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$25 Heifers, same age, \$35. **POLAND CHINA FIGS,** \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battletown, N. C.

THOROUGH-BRED....

Berkshire Boars, Dorset Buck Lambs, Jersey Bull Calves.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centreville, Md.

TEN Jersey Heifer

Calves 4 to 6 weeks old at \$15 each, or will sell in lots of 5 for \$60. A. R. VENABLE, JR., Box 147, Farmville, Va.



Pure-Bred Registered SHORT HORN

Bulls, for sale, 1 yearling, 1 9 mos. old This is a splendid opportunity to secure a first class bull cheap.

I. S. EBERLY.

Glendale, Va.

Elkton Stock Farm,

LOCATED ON NORFOLK & WESTERN R. R.
12 Miles W. of Lynchburg.

Breeders of Pure Bred, Registered

HEREFORD CATTLE

AND

BERKSHIRE HOGS.

Young stock for sale at all times, at reasonable prices.

All statements and representations guaranteed.

LONG DISTANCE TELEPHONE.

FOREST DEPOT, VIRGINIA.

WASHINGTON NOTES.

No foreign country has a more comprehensive or better system of live stock inspection of imports than the United States. One of the first steps ever taken by the United States for the control of contagious diseases among animals was the establishment of quarantine stations at the principal Atlantic ports. Here imported animals might be detained until it could be determined that they were not infected with disease contracted in other countries. This system has now been extended so as to include the Pacific Coast ports and the frontier borders of Canada and Mexico, thus completely surrounding us. These quarantine stations were at first under the Treasury Department but later the control was transferred to the Bureau of Animal Industry. The wisdom of maintaining them has been often apparent. When pleuro-pneumonia was eradicated it was not again permitted to enter from Europe, where it was prevalent, and rinderpest, which has almost annihilated the herds of South Africa, the Philippines, and other foreign countries, has not been allowed to gain a foothold here. The dread foot and mouth disease of Europe has often been turned back by the Bureau inspectors.

PURE FOOD LAW—WOULD HIT BEEF TRUST.

Senator Heyburn, of Idaho, announces that he has no intention of abandoning his pure food agitation of last winter. He pledges himself to keep pounding away in the Senate with the hope and firm expectation of seeing a national pure food bill enacted into law. The House has several times passed such a bill. Senator Heyburn will redraft the measure during the recess, keeping before him every tangible objection raised last winter and he announces that he will then make a determined contest on the floor of the Senate. Senator Heyburn is a fighter and his strong aggressiveness may mean the forcing of favorable action upon this much needed measure.

In sneaking of his proposed campaign Senator Heyburn said: "The necessity for a Federal pure food bill is obvious. Almost every State in the Union has adopted more or less efficient legislation of this character, and the prevention of the manufacture and sale of misbranded or adulterated foods, drugs and liquors would be comparatively effective were it not for the 'unbroken package decision' of the Supreme Court, under which one State is practically powerless against the importation of this class of goods from another State. I will admit," he continued, "that the Senate did not, last year, very seriously consider the bill and it became a foregone conclusion that it would be killed.

"There is one change I shall make in my new bill, namely, to abandon the term 'foods' as applied to whiskeys. Whiskeys are 'liquors.' There



High-Class Aberdeen Angus.

Choice males suitable for heads of most select herds. Send for printed description.

JOHN T. & G. B. FANLOVE,
MILTON, IND.

Rose Dale Herd Aberdeen Angus.

Top notch young registered Bulls our specialty. A few heifers to offer with bull not skin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS, Jefferson, Va.

MONTEBELLO HERD ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va.

DEVON HERD, HAMPSHIRE DOWN FLOCK
ESTABLISHED 1884. ESTABLISHED 1880.

DEVON CATTLE BULLS and HEIFERS.

Hampshire Down Sheep,
RAMS and EWES.

ROBERT J. FARRER, Orange, Va.

Dorset Sheep. WOODLAND FARM DORSETS

are better than ever before. We have rams of all ages, flock headers, for sale. Also some useful ones suitable for grade ewes. All recorded and of best breeding. J. E. WING & BROS., Mechanicsburg, Ohio.

HEREFORD CATTLE, DORSET SHEEP....

Will sell every hoof on my farm at a bargain to the right man. Write me at once. H. ARMSTRONG, Lantz Mills, Va.

Hereford Bull

FOR SALE from one of the best herds in Valley of Virginia, 4 years old, registered, sold to avoid inbreeding; price right. Address Box 42, Oxford, N. C.

"Feeds and Feeding"

Prof. Henry's Great Book for
Farmers and Stockmen.

Delivered anywhere for - - \$2.00
With the SOUTHERN PLANTER, 2.25

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

RELIABLE SEEDS

- AT -

REASONABLE PRICES.

...WE ARE HEADQUARTERS FOR...

**SORGHUMS, MILLETS, COW PEAS,
BUCKWHEATS, SOJA BEANS, FODDER
PLANTS, SEED CORNS, GARDEN
and FLOWER SEEDS of the highest
quality and germination. Insecticides.**

**Planet Jr. Garden Tools, Sprayers
and dusters.**

Send us your orders and you will get
GOOD SEEDS every time.

Write for Quotations.

CATALOGUE MAILED FREE

DIGGS & BEAULES,**SEEDSMEN,**

RICHMOND, - VIRGINIA

Peas For Sale

2,000 bus. mixed peas, \$1.20
1,000 bus. clay peas, - 1.30
500 bus. whippoorwill peas, 1.40
500 bus. soja beans, - - - 1.35
200 bus. re-cleaned Buck-
wheat, per bushel - - - 1.10
25 to 50 bus. Amber Cane
Seed, per bushel - - - 1.15
Socked and F.O.B. prices sub-
ject to market changes.

HICKORY MILLING CO.,

Hickory, - - North, Carolina.

Improved

Peach Blow, Late Seed Potatoes

for sale at \$2 per barrel f. o. b. here on all
orders received on or before June 1st. The
best drouth resisting, sort known here. I
made 340 bushels on two acres last year,
planted July 8th. Pure bred BARRED
PLYMOUTH ROCK eggs at \$2.50 per 100.
A few pounds EVERGREEN BROOM CORN
of my own raising at 15c. per pound. All
orders promptly filled. J. M. HUGHES,
Riverview Farm, Claremont, Va.

MAGNUM BONUM

... AND ...

Claremont Peach Blow

SEED POTATOES: 10 bbls. of the for-
mer and 40 bbls. of the latter for sale at \$2
per bbl. Both varieties unsurpassed. Or-
der quickly. CHAS. G. DEISSNER, Wied-
man, Va.

is no reason why the adulterated and
chemical concoctions sold as whiskey
should parade under the name of food.

WOULD HELP THE STOCK GROWER.

"One evil which the bill would reme-
dy is the interstate traffic in decom-
posed meats." Under existing condi-
tions, the great packing concerns kill
and place in cold storage great quanti-
ties of meat which they buy when the
market is lowest and store for a rise.
In fact, they themselves frequently
create the rise, and then sell out their
reserve supplies, but, unfortunately,
some of this meat remains in storage
for years, becomes diseased, impreg-
nated with decomposition, and then is
sold to unwitting consumers, who may
be seriously injured by eating it. One
advantage the packers enjoy as a re-
sult of this system is to control abso-
lutely the market for dressed meats
and the prices of live stock. When-
ever the market stiffens up and the
cattle and sheep raisers attempt to
secure a little higher price for their
stock, the packer draws on his cold
storage supply and informs the cattle
raiser that the demand has fallen off
and that he must sell at lower prices
or not at all."

Senator Heyburn promises the most
effective campaign yet made for a pure
food law. He very nearly succeeded
in compelling Senators to commit
themselves by a yeand-nay vote in
the closing hours of the last session,
and there was nothing they would
have been more loath to do, while the
mail of many Senators, probably all,
indicates serious disappointment on
the part constituents because the pure
food bill did not become a law.

Exports of cattle, hogs and sheep
for the nine months ending March 31st
were 30 million dollars against 31 mil-
lion dollars for the corresponding
months of 1904. 19 million dollars for
1903 and 22 million dollars for 1902.

The soil inoculation experiments of
the Department of Agriculture have
stirred up more interest in the plant-
ing of alfalfa, clover, cow peas, and
other legumes than has ever before
been manifested by farmers. The
announcement that the growth of cer-
tain of the clover and bean tribe could
be stimulated by bacteria has brought
in such a raft of applications to Sec-
retary Wilson as to entirely exhaust
the Department's supply. Here is
something which promises much for
agriculture in general and increased
soil fertility in particular. Dr. Moore,
the soil bacteriologist of the Depart-
ment, states that out of 5,000 reports
on soil inoculation experiments last
year 80 per cent. were favorable. This
would appear to be something which
Congressmen, desiring re-election, in
their great wisdom, might employ to
full advantage with their farmer con-
stituents to establish themselves solidly
in place of voting for enormous
annual appropriations for the free
seed farce, while at the same time
something of real benefit to the coun-
try might develop.

Albemarle Prolific Seed Corn,
the most successful cross of Cooke's Prolific,
1683, bushels shelled to acre.

RED POLLED CATTLE.**POLAND CHINAS.****Mammoth Bronze Turkeys.**

Gobbler weighs 5½ lbs and has taken eight
premiums at different fairs and shows

White Holland Turkeys,**White Plymouth Rocks,****Fancy Barred Rocks,****"RINGLETS"**—great prize winners.**Light Brahmas.****EGGS IN SEASON.**

ARROWHEAD STOCK FARM,
SAML B WOODS, Prop., Charlottesville, Va.

Cow Peas

For sale: about 700 bushels mixed cow peas
mostly CLAY and WONDERFUL. Price, \$1.15
per bushel f. o. b. Hartsville, S. C., cash with
order. References, Dun and Bradstreets.

J. L. COKER & CO., Hartsville, S. C.

SEED CORN

FOR SALE

WHITE SALAMANDER

**SELECTED SEED CORN, BEST FOR
LATE PLANTING.**

Matrices in 90 days, deep grain, white
cob. 65 pounds of shelled corn to 70 pounds
ears. Large ear on heavy short stalk,
making splendid fodder. The best corn I
have ever used, yielding 12 barrels per
acre on medium land. \$1.50 per bushel.
Cash with order. F. M. MAGRUDER,
Eastham, Albemarle county, Va.

Roses! Roses!

COLD GROWN, OWN ROOTS, EVER-
BLOOMING, and the best of ALL STAND-
ARD sorts, including RUNNERS. Write for
free catalogue, containing full directions for
ROSE CULTURE. We are anxious to please
one, and especially those who cannot visit
us and make their own selections. MERIT
ROSE CO., Richmond, Va.

Jacks, Jennets and Mules.

A fine lot of Ken-
tucky bred and big
black Spanish jacks
and jennets. Also
mules, match teams,
one to six years old.
Write or see me be-
fore you buy. Come
to Kentucky if you
want a good jack.
KENTUCKY JACK
FARM, JOE E. WRIGHT, Junction City, Ky.

Mammoth Jacks.

50 registered MAMMOTH JACKS; some
nice JENNETS and SADDLE STALLIONS.
Write for catalogue and come to see us be-
fore you buy. J. F. COOK & CO., Union
Stock Yards, Lexington, Ky.

Will Exchange

For LARGE JENNET, one good horse-power
and wood saw, or pure Red Polled Bull and
Heifer calf. W. S. MOTT, Dixondale, Va.

Mention THE SOUTHERN PLANTER in
writing.

HINTS BY MAY MANTON.

Two events that mark the young girl's life are her confirmation and her graduation, for each of which she requires a simple yet attractive frock. Here is one well adapted to both and that can be made from any suitable material, sheer mull, lawn, dotted muslins and the like and also or the simple silk which is well liked for both occasions. In this instance the little chemisette is lace and the trimming is banding of lace with ruchings of the material, but this also can be varied, embroidery or tucking being used if a simpler effect is desired, while again the sleeves can be made full length if preferred.



5002 Confirmation or Graduation Dress.
12 to 16 years.

The dress is as simple as it is attractive and can be made either with or without the smoothly fitted waist lining as pattern renders desirable. The skirt is full and graceful, made with a straight, upper portion and straight flounce. The flounce is shirred at its upper edge and joined to the skirt, which again is shirred and arranged over a foundation yoke. At the waist is a draped belt, which preferably would be made of some soft silk.

The quantity of material required for the medium size (14 years) is 9-1-2 yards 21, 7-1-2 yards 27 or 5 yards 44 inches wide, with one-half yard of all-over lace for the chemisette, 2-5-8

\$360 NET PROFIT

IN FEEDING ONE TON TO YOUR CATTLE, HOGS, HORSES OR SHEEP.

One Hundred Pounds will make you \$18.00 net profit. "International Stock Food" with the World Famous Line—3 FEEDS FOR ONE CENT—is known everywhere. It is prepared from High Class powdered Roots, Herbs, Seeds and Barks and Purifies the Blood, Tones Up and Permanently Strengthens the Entire System, Cures and Prevents Disease and is a remarkable aid to Digestion and Assimilation so that each animal will gain more pounds from all grain eaten. We positively guarantee that one ton of "International Stock Food" will make you \$360.00 Net Profit, over its cost, in extra Milk, Growth or Quick Fattening of Cattle or Hogs in Winter, Spring, Summer or Fall and at the same time keep your stock Healthy and Extra Vigorous.

Guaranteed to Fatten Your Stock in 30 Days less time and to save grain. "International Stock Food" is splendid for all kinds of Breeding Stock and is universally acknowledged as the leading High Class Medicated Stock Food of the world and harmless even for the human system. It is equally good for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs and Pigs. Endorsed by over Two Million Farmers. Our One Hundred Thousand Dealers always sell it on a "Spot Cash Guarantee" to Refund Your Money if it ever fails. Ask Your Dealer For It. Guaranteed to Save 3 Quarts of Oats Every Day for each Work, Carriage or Driving Horse. Our \$150,000 Champion, Dan Patch 1:56, Directum 2:05½ and Arion 2:07½ eat "International Stock Food" Every Day.

DAN PATCH 1:56 MAILED FREE

If you Name This Paper and State the Number of Stock You Own we will Mail You FREE a Beautiful Colored Lithograph of our World Famous Champion Stallion Dan Patch 1:56. It is printed in 6 Brilliant Colors and is 21 by 28 inches. See our large advertisements or Write Direct to Our Office. We employ an office force of 300 with 150 typewriters and all correspondence is answered promptly.

We will be pleased to have you write us for any desired information.

INTERNATIONAL STOCK FOOD CO.,
Minneapolis, Minn., U. S. A.

Capital Paid in
\$2,000,000

Also Toronto, Canada.

Many Inferior Imitations
Now on the Market.

The Grove Stock Farm

Offers 6 PURE-BRED

DORSET EWES

(Three 2 years and three 1 year old)

Registered and transferred to the buyer for \$65.

N. & W. and Southern Railways.

T. O. SANDY, Burkeville, Va.

JNO. S. FUNK, Glen Farm.

Importer and Breeder of Registered



Polled Durham Cattle.

PURE BRED
SOUTHDOWNS.

REGISTERED
POLAND-CHINAS.

Recently got a carload of Polled Durhams from the West.

I have added a very fine herd of Reg. POLLED ANGUS CATTLE to the Glen Farm. Chief sire weighs 2,100 lbs. This herd cannot be surpassed anywhere. Address JNO. S. FUNK, R. F. D. 7, Harrisonburg, Rock Co., Va.

yards of insertion, three-eighth yards of silk for belt and 8 1-2 yards of ruching.

The pattern 5002 is cut in sizes for misses of 12, 14 and 16 years of age.

The variety of materials suited to shirt waist gowns was never so generous, never so attractive as at the present time. Here is a most excellent model made from Scotch muslin, blue with lines of black, that is both simple and smart, combining a waist and skirt of the latest design. The color effect is an exceptionally attractive one but the model, nevertheless, can be reproduced in any of the washable materials of the season and also will be found admirable for the simple silks and wools that are suited to gowns of the sort. The waist is made with tucks from the shoulders to the waist line and allows a choice of being



DESIGN BY MAY MANTON.

Blouse or Shirt Waist 4982.
Graduated Tucked Skirt 4980.

worn under the skirt or over in blouse style. The skirt is five gored and laid in four tucks of graduated width while the fulness at the top can either be tucked as illustrated or shirred to yoke depth. For a woman of medium size will be required for the waist 4 yards of material 21, 3 1-2 yards 27 or 2 1-8 yards 44 inches wide; for the skirt 13 3-4 yards 21, 10 1-2 yards 27 or 6 1-4 yards 44 inches wide. A May Manton pattern of the waist, No. 4982, sizes 32 to 40, or of the skirt, No. 4980, sizes 22 to 30, will be mailed to any address by the Fashion Department of this paper on receipt of ten cents for each.

May and June Eggs

FROM MY

S. C. B. Leghorns

—AND—

WHITE PLYMOUTH ROCKS

at \$1.00 per sitting.

I guarantee a hatch of 10 chicks from 15 eggs.

Sweet potato plants, 20c per hundred.

R. W. HAW, Jr., Centralia, Va.



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CUT PRICES.

5,000 New Customers wanted, to add to our already large list. As an inducement we will sell eggs of our famous thoroughbred poultry as follows:

	Per sitting.		Per sitting.
Barred P. Rocks.....	15, \$ 90	Light Brahmas	15, \$1.00
White P. Rocks.....	15, 90	Buff P. Rocks.....	15, 1.30
Black Langshans.....	15, 90	R. & S. C. Brown Leghorns.....	15, 1.00
Buff Langshans.....	15, 2.25	R. & S. C. Buff Leghorns.....	15, 1.15
Golden Wyandottes.....	15, 95	S. C. White Leghorns.....	15, 1.00
White Wyandottes.....	15, 90	S. C. Buff Orpingtons.....	15, 1.25
Buff Wyandottes.....	15, 1.00	S. C. White Orpingtons.....	15, 1.65
Partridge Wyandottes.....	15, 1.00	White I. Game.....	15, 1.30
S. & R. C. B. Minorcas.....	15, 95	Cornish I. Game.....	15, 1.50
S. C. White Minorcas.....	15, 1.10	R. B. R. Game.....	15, 1.25
Partridge Cochins.....	15, 1.00	R. C. R. I. Reds.....	15, 1.10
American Dominiques.....	15, 1.00	Imperial Pekin Ducks.....	11, 1.15



FREE a copy of Heatwole's book on poultry for 1905. This book illustrates and tells all about over 45 varieties best poultry. It tells how to treat diseases, feed and care for poultry with success. Order from this advertisement and get the book FREE with your order for eggs while the books last.

JOHN E. HEATWOLE, Box L, Harrisonburg, Va.

FRONT ADAMS EXPRESS AGENT.

To Whom it May Concern:

Mr. J. E. Heatwole, breeder and shipper of fancy poultry, is personally known to me and by the public generally. He is thoroughly reliable and can be depended on.

Yours truly,

GEO. E. SHUE.

..ELMWOOD NURSERIES..

—WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF—

APPLES, PEACHES, PEARS, CHERRIES, PLUMS, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

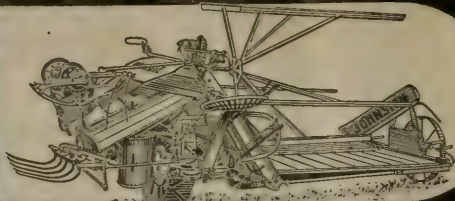
GOOD ROADS, CHRISTIANITY AND EDUCATION.

The United States Bureau of Education has for some years had under consideration the question of the consolidation of public schools and the transportation of pupils to and from the schools after consolidation. In the report of the Commissioner of Education for 1900-1901 the subject is treated somewhat at length, and more fully in the report for 1902 and that for 1903. From these reports it appears that the policy of consolidating small schools and transporting the more distant pupils to a central (usually graded) school at the public expense has been resorted to in twenty-two States to a greater or less extent—as follows: Connecticut, Florida, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin. While the proposition may yet be said to be in the experimental stage, the consensus of experience in these States shows that a consolidation of schools results in a saving of money, in improved schools and in more regular attendance. Summarized, the following important advantages are attained:

1. Consolidation and transportation decreases the aggregate cost of rural schools or gives greater efficiency at the same cost.
2. Secures to the pupils better instruction, better buildings and equipment, and longer periods for recitation.
3. Insures closer supervision by officials and stronger principals.
4. Conduces to better health and morals.
5. Continues in school country matrons liable to remain at home because of vagabond tramps or large bodies of employed men in certain localities.
6. Holds in school youth advanced beyond the curriculum and discipline of most small schools.
7. Relieves mothers anxious about their girls and children of tender years.
8. Eliminates truancy and diminishes irregularity.
9. Enables to attend many out of reach of a school without transportation.
10. Enhances the value of the instruction, because the larger the number of pupils the fewer the grades per teacher, and the more of himself the teacher is enabled to give to each pupil.
11. Awakens healthy rivalry through the inspiration of numbers.
12. Makes compulsory attendance more feasible and justifiable.

One of the most important problems for our rural communities has been how best to secure the benefits of a graded school system so as to enable the farmer to give his children instruction in the higher branches of

BUILT FOR BUSINESS



THE JOHNSTON

We can't tell in this space all the good points of the "Bonnie" open elevator, right-hand binder, it takes a special book to do that. But we can mention the prominent points that have won for it the name of being the only successful low-elevator binder made. They are points you need to know before buying. Steel main and grain wheel with roller bearings in both, one piece steel frame, one piece steel platform, canvas tighteners, all right hand levers, reel adjustment completely around a circle, greatest capacity of elevation, lowest elevators 27 inches, even balance. Every point about the "Bonnie" is a point in the operator's favor. Send for the "Bonnie" book and see the proof. Also catalogue of the Johnston Grand Prize winning line. Both free.

Box C-11 THE JOHNSTON HARVESTER CO.
Batavia, N. Y.

"BONNIE" BINDER

LARGE YORKSHIRES.

The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times.

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

Address BOWMONT FARMS, Salem, Va.

10 REGISTERED

JERSEY HEIFERS,

From \$20 to \$50 each.

GUERNSEY BULLS, 6 months old, \$30 to \$40.

BERKSHIRE HOGS, all ages, and Pigs not akin.

EGGS from Barred Plymouth Rocks, Brown Leghorns and Pekin Ducks \$1 per sitting, carefully packed.

Also TOULOUSE GEESE. Eggs \$3 per dozen.

M. B. ROWE & CO., Fredericksburg, Va.

HOLSTEIN - FRIESIANS

Have reduced our herd 25 head during the past two months, but would like to sell as many more before going into winter quarters. Herd headed by Dokol 2d, Butter Boy 3d, No. 2, which we can justly claim the best butter backed bull South of the Mason and Dixon line. Also a choice lot of English Berkshire sows from 3 to 9 mos. Sired by Manor Faithful, Fancy Duke and Esau Princess of Filston. Before buying write or come and see us. THOS. FASSITT & SONS, Sylmar, Md.

BILTMORE FARMS

Biltmore, N. C.

First Annual Sale of Homebred and Imported

GOLDEN LAD JERSEYS, August 22, 1905.

Sixth Offering of Selected

LARGE ENGLISH BERKSHIRES, August 23, 1905.

... FOLLOWED BY ...

A Summer Camp on the Biltmore Estate for one week, open to the Jersey and Berkshire Breeders and Dairymen of America.

From present indication some 200 of these will be in attendance, and to accommodate them we are fitting up Inanda Lodge, the most commodious residence on the Biltmore Estate, (outside of the Biltmore house), and which will accommodate about 60. For those wishing to camp out there will be floored tents on the lawn, with cots; and also a special rate of \$2.50 is given by the Kenilworth Inn.

Apply early if you want a vacation on the Biltmore Estate. Daylight mountain excursions and Breeders' meetings and Dairymen's Institutes in the evenings. An attractive program with some of the best experts as speakers is being arranged, and will be announced later.

We are selecting a few choice imported Cows and Heifers.

But the majority will be bred from imported parents, with all the *quality* of the Island animal, but being home raised *will prove more profitable* to the buyer than any directly imported.

We are selecting the quality and breeding to make this the best and healthiest offering of the year.

It has cost us many thousand dollars to cut our wisdom teeth buying at public auction, and we will protect our customers from a like experience.

POULTRY

81 prize matings of our UTILITY breeds of Poultry. BARRED AND WHITE ROCKS, WHITE AND GOLDEN WYANDOTTES, BROWN & WHITE LEGHORNS, PEKIN DUCKS, AND BRONZE & WHITE HOLLAND TURKEYS are now shelling out fertile eggs for this year's demands of progressive breeders. Send for illustrated price-list.

We can still fill orders for young bulls and heifers, and also 2 and 3 months old Berkshires without interfering with our public sale selection.

IT WILL CERTAINLY PAY YOU TO WRITE TO HEADQUARERS BEFORE BUYING.

learning without leaving the farm. The writer believes that the policy of consolidation and transportation of pupils furnishes a solution of the problem if the policy can be perfected. The next and most important question is: how can this be done; in what way, and after what preparation, can a perfect system be established or made possible of establishment? We are firmly of the opinion that the system of education outlined and which means so much for the country will never be perfected and become a fixed policy until there is national aid in the construction of good wagon roads, say along the line of the bulls introduced in the House of Representatives by Hon. W. P. Brownlow, of Tennessee, and in the Senate by Mr. Latimer, of South Carolina. In hearings on the good roads subject before the Senate Committee on Agriculture it was shown that of all the roads in the United States there are only 5 per cent. good, 10 per cent. fairly passable and 85 per cent. bad; that is, stallions of teams in the dust, and the creators of insufferable dust storms in dry weather. "Fifteen per cent. are roads, the remainder mere rights-of-way."

While striving after the best results in its own particular field and studiously seeking improvements under functions that belong to it alone, that very important branch of the public service known as the Bureau of Education has, in its investigations, gathered practical facts and detailed statistics that furnish irrefutable argument in favor of national aid to good roads. Because no government can prosper save by the enlightenment of its people. President Roosevelt, in a speech at St. Louis in 1903, declared that the difference between the semi-barbarism of the Middle Ages and the civilization which succeeded it was the difference between poor and good means of communication. On Bedloe's Island in New York harbor stands Liberty Enlightening the World. "Go ye into all the earth and preach the Gospel to every creature" means now, as when first communicated to man, that the highways and the byways furnish a fruitful field for Godly work. Following the construction of good roads civilization expands, education increases and Christianity widens and broadens its field of operation. But education is not possible and Christianity is retarded where school houses cannot be reached, and school houses cannot be reached where the highways are not at all seasons passable. No fixed policy of consolidated schools will prevail until there is systematized construction of wagon roads, and no fixed policy of road construction is possible except by Federal co-operation with the States and the political divisions thereof.

The common or wagon roads are the primary means of transportation and communication. The railroads have

Rotary Pie Trimmer



a handy article for House Keepers. Price post-paid, 50 cents Cleora, Stange, Yates Center, Kansas



TELEPHONES

and line material for FARMERS' LINES

So simple you can build your own line. Instruction book and price list free. The Williams Telephone & Supply Co., 66 Central Ave., Cleveland, O.

EGGS from Yoder's SILVER LACED WYANDOTTES

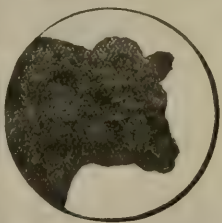
produce prize winners. Prolific layers; finest broilers; one of the best all-purpose fowls. Fresh fertile eggs, 15 for \$1.25 30 for \$2; 100 for \$8. "Your money's worth or money back." S. P. YODER, Deubigh, Va.

... SUNNY HOME HERD ...

Aberdeen Angus Cattle

I am pleased to announce this month that I have secured from the great "Grandview" herd of Illinois the extraordinary high class young sire "Jester," 66071, to assist Baron Roscoe in the herd. Jester is one of the top yearling bulls of the breed. His sire, the double Erica bull, imp. Equestor, is a brother of "Blon" (one of the greatest living Angus sires), brother also of the great Scotch Champion, "Alick of Aberlour," the sire of "Proud Fellowman of Aberlour," at the head of the great Glendale herd until its dispersion, when he went to the head of the Grandview herd. Alick of Aberlour is also the sire of Painstaker of Aberlour, at the head of the famous "Kerrick" herd.

Jilt, 12th, the dam of "Jester," is one of the best bred Jilt females in America, and is the best individual cow in the Grandview herd. "Good blood breeds on." We have a few bull calves by Roseby, one a Queen Mother, good enough to head a first class herd. Write A. L. FRENCH, R. F. D. 2, Byrdville, Va.



YOU WILL FIND IN THE DELAWARE HERD OF

ROYAL ANGUS CATTLE

a most SUPERB LOT OF INDIVIDUALS, both sexes, of GRAND BREEDING.

Our herd bull, PRINCE BARBARA 68,604, is a half brother to Prince Ito 2nd, grand champion at St. Louis. Females equally noted. Remember, we do not charge fancy prices. Drop a postal for pamphlet and list of bargains we are now offering. Satisfaction guaranteed, of course.

MYER & SON, Props., - Bridgeville, Del.

GLEN ALLEN STOCK FARM, Breeder of Aberdeen Angus Cattle.



"The Bulls that have Made Glen Allen Famous."

Herd headed by ALLENHURST KING 4, No. 47199, son of McHenry Blackbird 20th, 32499, assisted by POLLY'S ITO, 78790, son of Prince Ito, 50006, the famous \$9,100 bull.

Young Bulls for sale at reasonable prices, fit to head the best of herds, regardless of price or breeding.

W. P. ALLEN, Proprietor,
R. F. D. No. 1, Ewing, Va.

MORVEN PARK.

The Property of WESTMORELAND DAVIS, Esq.

GUERNSEYS.

HERD BULLS: Imported TOP NOTCH 9023, A. G. C. C., assisted by MAIN-STAY'S GLENWOOD BOY 7607, A. G. C. C. BULLS ONLY FOR SALE.

Large White Yorkshires.

Imported Boars, from the herds of Messers Sanders Spencer & Son and other leading English Breeders, for sale at moderate prices. These Registered Boars are especially recommended as fine individuals, belonging to prolific, richly bred and prize-winning families.

Dorset Horned Sheep.

Imported Ram Lambs for sale. These Rams are from the noted flock of W. R. Flower, Esq., Dorchester, England. The opportunity is now presented to secure, at a reasonable price, this well known strain.

Flocks and herds may be viewed by appointment.

For further particulars, Address

**LIVE STOCK DEPARTMENT, MORVEN PARK,
LEESBURG, LOUDOUN CO., VA.**

their uses, and they are important, but people do not use them to reach church houses and school houses. Christian civilization and education call for better means of propagation. Public school work goes hand in hand with the spread of religion. It needs no argument to show that every church interest and every school interest is closely connected with the question of public road improvement throughout the United States. We are a Christian nation, and we are an educational people. The very life of the republic depends upon the influence of the churches and the schools, for these are the certain promoters of high ideals in citizenship and the inculcators of that fine spirit of patriotism which enables good government and sustains it wherever established. If there were no other reasons why the government should at once adopt and put into practice a good roads policy in co-operation with the States should do so in support of public education and the spread of the Christian religion.

We repeat that the United States Bureau of Education, while working in its own particular field, has supplied one of the most forceful arguments yet presented in favor of national aid to good roads, and we should much like to see every church and school journal in the land take up the question and discuss it for the benefit of the cause in which they are engaged.

It gives us pleasure to call our readers' attention to the following letter received by the firm to whom addressed from the Universal Exposition, St. Louis, Missouri:

To Prairie State Incubator Co.,
Homer City, Pa.

Pursuant to the rules and regulations governing the system of awards, formal public announcement is hereby made that a gold medal has finally been awarded you on your exhibit of Incubators and brooders in group No. 82. A medal and diploma for this award will be issued by the Exposition Company as soon as ready for delivery.

(Signed) DAVID R. FRANCIS,
President of Superior Jury.

By this it will be seen that the Prairie State Incubator Company, of Homer City, Pennsylvania, have added one more medal to their already long string of 326 first premiums received at various expositions and fairs throughout the country.

Their catalogue also records hundreds of original testimonials from users of their machines, from the extensive poultryman as well as the small beginner, and they all report good results. Their catalogue is well worth sending for, as this is one of the old, practical and reliable institutions.

Agents Wanted!

IS THE BREEDER'S GAZETTE
REPRESENTED
IN YOUR NEIGHBORHOOD?

WE want agents to solicit subscriptions in all unassigned territory. Liberal cash prizes to all who get up clubs. Competition commences NOW. New prize list just issued. **THE GAZETTE** is the stock farmer's newspaper, 36 to 56 pages weekly and beautifully illustrated. A sample copy and premium list sent free to all applicants who mention this paper. Address **SANDERS PUB. CO., 358 Dearborn St., CHICAGO, ILL.**

Grazing for 100 Cattle.

Rate \$3.00 per head for the whole Summer until November 1st.
Special Rates for Herds of Twenty and over. ❖ ❖ ❖ ❖

Also Pasturage for a few Horses at \$1.00 per Month.

Applications should be made early. Address

BULLFIELD FARMS, Doswell, Va.

ANGORA GOATS.

We have just imported over 300 fine Angoras from New Mexico. We have Angoras from Oregon, Texas, California and New Mexico.


DIAMOND V RANCH,

Rock Castle, Va.

Great Sale of SHORT-HORN CATTLE,

— AT —

BRISTOL TENNESSEE, May 31st, 1905.



The offering will comprise pure bred breeding stock consisting of COWS, HEIFERS, and BULLS, HEIFER and BULL CALVES, SCOTCH and SCOTCH-TOPPED BATES from some of the best herds in three States contributed by members of the Short-Horn Breeders' Association of Southwest Virginia, East Tennessee and Western North Carolina, under whose auspices and management this sale will be held. None but high class breeding animals will be offered and the sale will be strictly fair. ALL ANIMALS OF BREEDING AGE ARE BRED TO PURE SCOTCH BULLS of high merit and will offer great advantages to those looking for desirable Short Horns.

The sale will be conducted under cover at Moore & Hart's sale barn, Bristol, Tenn.

The sale will be for cash or good bankable notes on six months time. Col. R. E. Edmondson, Auctioneer.

For Catalogue apply to

C. E. BRYANT, Sec'y.,
Bridle Creek, Va.

Or to

W. W. BENTLEY, President,
Pulaski City, Va.

Or to

CHAS P. BOOKER, Gen. Manager,
Bristol, Tenn.



COOPER & SONS SALE MAY 30 1905
AT COOPERSBURG, PA.

A PLEASSED BUYER IS THE BEST ADVERTISEMENT.

The imported Jersey Cattle sold at our May, 1904, Auction Sale have given universal satisfaction. My most sanguine expectations have been more than realized. How could it be otherwise? Individually, they were strictly FIRST-CLASS.

BEST OF ALL, they were bred on both dam and sire's side from animals that have made the Island cattle so famous—the blood that wins at the churn and in the show-ring.

Catalogues ready for distribution May 1, and owing to great cost publishing same, they will only be sent on application. Address

T. S. COOPER & SONS, "Linden Grove," Coopersburg, Pa.

P. S.—Would respectfully request parties who are in want of an extra fine bull calf, or a few fine heifer calves, that they send for a catalogue, which will give them full particulars, and if they are not able to attend the sale in person, that they send in their bids, and they will receive the same attention as if the buyer was a bidder himself. It is with pride that we refer to parties that have entrusted such orders to us. This will be a rare chance to get calves out of the very best cows the Island can furnish, and sired by prize winning bulls, and they will not cost you more than others that have no breeding.—T. S. C. & Sons.

HEREFORD CATTLE

FOR SALE.

MATURE BULLS,
YEARLING BULLS,
BULL CALVES,
BREEDING COWS with calf at foot or bred.

Now is the Month to Buy and to Take Advantage of the Early Grass.

PRICES REASONABLE

MURRAY BOOCOCK,
KESWICK, = = = = = = VIRGINIA.

EGGS FOR HATCHING.

The Imperial Fruit and Poultry Farm.

We are offering Eggs from strictly high class mated pens for \$1.00 per 13. Send in your orders for any of the following:

S. C. White and Brown Leghorns,
White and Barred Plymouth Rocks,
White or Laced Wyandottes.

R. R. HEYDENREICH, Mgr., Staunton, Va.

you need it one cup of cream, sift two cups of flour with one teaspoon of cream tartar, and half teaspoon of soda in it twice, add this and then add the whites of the eggs and bitter almond. Bake in a sheet and frost with orange frosting.

UNIVERSAL CAKE.

One cup of butter in which cream, two cups of sugar, add the beaten yolks of four eggs, one cup of milk and four cups of flour. One teaspoon of cream tartar and one of soda, then the whites of eggs, bake in layers.

SIMPLE SPONGE CAKE.

Sift one cup of flour five times. Beat five eggs separately until very light, add the one cup of sugar to the yolks and beat hard, then add the whites and flour, alternately beating as little as is possible, season with nutmeg and bake in a loaf in a hot oven.

STRAWBERRY WINE.

Very few people know what a pleasant drink wine made from strawberries is, and that as a seasoning it is better than almost any other wine. Cap the strawberries and to each gallon add one quart of boiling water, let it stand twenty-four hours and strain through a bag. Add three pounds of sugar to each gallon of the liquid and let it stand for six weeks without corking, then rack it off and put into bottles, cork tight and cover each cork with cement. Put away in a cool dry place and do not open for four months. It is much better at a year old.

STRAWBERRY VINEGAR.

Cap the berries and to every five pounds of berries add three quarts of good wine or cider vinegar. Let it stand for two days and drain off the juice, add five pounds more of the fruit and after three days strain again and add fresh fruit for the third time. After straining the last time put it, the juice, into a porcelain kettle, adding nearly a pound of sugar to each pint of juice, put it over the fire and let it cook five minutes. Skim carefully and when it is cold bottle and cork. A tablespoon of this to a glass of ice water makes a cooling drink, which is very refreshing, especially so in fevers.

AN OLD RULE FOR CHERRY CORDIAL.

Press the juice from ripe Morella cherries, any of the sour cherries will do. Strain and sweeten very sweet. One pound of sugar to every three pounds of fruit. When the sugar is dissolved put it on the fire and boil a few minutes. Add one gill of good brandy to each pint of juice and when cold bottle and cork and seal. This keeps well and is delicious in ice water on a hot day.

CARAVEN.

James City Co., Va., 4-5-05.

You are giving us a good paper containing much useful knowledge and experience of your contributors.

E. T. MARTIN.

There's PROFIT in LATE CHICKS.

Because the percentage of fertile eggs is much greater in April, May and June—that means **more chicks**.

Then again weather conditions are more natural—that means stronger, brighter, healthier chicks. Chicks that are hardy and vigorous—that **grow like weeds** and soon catch up with those hatched a month or two before.

16,000 Sure Hatch Incubators have been sold the last four months to be used for these **later chicks** and orders are **still coming**. Pretty good evidence that Poultry Raisers are waking up to where the **money lies**, isn't it?

The **Sure Hatch Incubator** is the best of its kind, and is the one you should have. It's made from **honest materials** clear through—is so good we can and do **Guarantee it for 5 years** and it is

Sold on 60 Days Trial

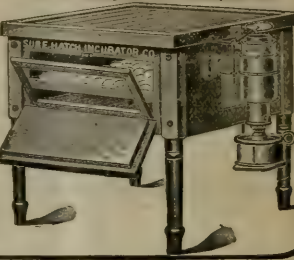
The 1905 Sure Hatches are **new machines**, conceived, designed, built, manufactured and sold **only by the Sure Hatch Incubator Company**. They have **exclusive features** that you can't get in any other incubator, for they're **patented**.

Special Prices
If You Write
NOW

For the next 60 days we will make you special prices. Write for **free catalogue**, and learn about our **liberal offers**.

Shipments made on the same day order is received. Address nearest office.

SURE HATCH INCUBATOR CO. 831 Clay Center, Neb.
1831 E. Washington Street, Indianapolis, Ind.



Baron Premier 3rd 75021,



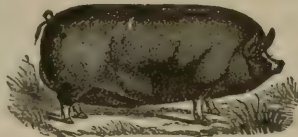
the head of our herd, was first in his class at World's Fair; weighs 900 pounds at 22 months. His dam is litter-mate to Lord Premier, 50001, selling recently for \$1,600; his sire was premier champion winner at World's Fair at St. Louis. With this great hog and a large line of both Imported and American well selected sows and gilts, especially chosen to mate with him, we are actually producing and accomplishing the pleasure of breeding the most magnificent strains of BIG, LONG, WIDE, DEEP, THICK-SET BERKSHIRE HOGS on short legs.

We are now offering a few bred sows and gilts and some three months pigs. It makes no difference how fine hogs you desire to purchase, you need not go farther than

MAPLE SHADE FARM,

W. H. COFFMAN, Propr. Bluefield, W. Va.

Seven March Litters



of 65 and FIVE APRIL LITTERS of 48, with hundreds more on route, with export inquiries coming in and scores booked for the United States, is the way the Berkshire business is progressing at Passifera; not a case of scours, thumps, sore mouth or any disease in the entire lot.

A FLOCK OF PEKIN DUCKS having learned the way to a big pond where they will get shot can be bought for \$1 each; they are laying and in fine fix. First check gets them.

PIT GAME, BLACK DEVIL STRAIN, eggs, \$1 for 15. S. C. BROWN LEG-HORN, eggs, \$1 for 15. PEKIN DUCK eggs, \$1 for 12. Beautiful birds, healthy and fine fowls, mother hens at 50c. to \$1, and their young broods at 8 1-3c. each. THOS. S. WHITE, Passifera Stock and Poultry Farm, Lexington, Va.

THE - OAKS - STOCK - FARM.

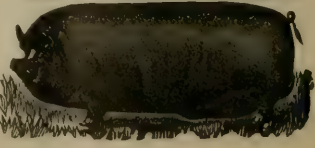
A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

We breed and ship the FINEST STRAINS of

Large ENGLISH BERKSHIRES

for less money than any firm in the South, quality considered. Every pig shipped possesses individual merit. Pedigree furnished with all stock. 200 Gallons Cider Vinegar.

ALEX. HARMAN, Mgr., Lexington, Va.



WOODSIDE BERKSHIRES

We are now booking orders for pigs May and June delivery, sired by my two great boars, LUSTRE'S CARLISE OF BILTMORE, No. 72057, and MASTER LEE OF BILTMORE, No. 79379, and out of sows weighing from 500 to 600 pounds in only fair breeding condition.

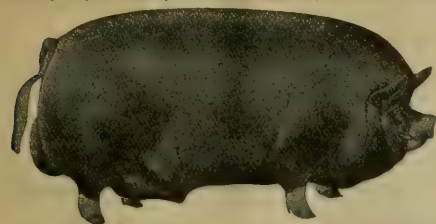
Lustre's Carlisle, who will not be two years old until June, now weighs 620 pounds, and is as active as a six months old pig. He is sired by Royal Carlisle, No. 68313, dam Topper's Lustre, No. 54923. Master Lee is sired by Loyal Lee, 2d, of Biltmore, No. 56332, dam imported Danesfield Mistress, No. 76377. Loyal Lee, 2d, is undoubtedly the champion Berkshire boar of the world, having more prizes to his credit than any other boar living or dead.

Danesfield Mistress is a daughter of Danesfield Huntress, No. 68173, who has an unbroken record of first prize at all the leading English shows with one exception, and then being defeated by her daughter, Danesfield Mistress.

Besides being royally bred, we consider Master Lee the best individual boar of his age we have ever seen, and predict that his get will make their mark in the show rings in 1906.

To show our confidence in what we offer and insure satisfaction to our customers, WE WILL SHIP PIGS TO RESPONSIBLE PARTIES ON APPROVAL. Address

WOODSIDE STOCK FARM,
CHARLOTTESVILLE, - - - VIRGINIA.



NEW DEPARTURE AT BILTMORE.

On another page the Biltmore Farms announce an important event in their progress. The first of a series of annual sales of high class Golden Lad Jerseys.

For the last ten years these farms have been carefully and gradually building up some very deep milking and high class herds—making frequent importations from the Island—buying at home when Island cattle of their type and blood lines have been offered, and reserving all the females with but few exceptions. These have been kept and developed under ideal conditions. The herds are carefully quarantined against outside contamination—inspected regularly by their resident veterinarian, and being the product of some of the best animals that the Island has produced and raised under such favorable conditions, they will illustrate in the sale ring a great combination of finish and substance.

The selection includes nothing but high class animals of a quality which the few breeders producing such could hardly sell without materially weakening their herds, but the Biltmore Farms with some 400 now on hand in five herds feel that the time has come when they can spare some of their best.

All will be guaranteed absolutely straight in every way—tuberculin tested, and of a quality which will make this annual sale in common with their Berkshire offering—the event of the year for those wanting the best foundation stock at a fair price.

"She brought me Faith and Hope and Truth.

She brought me gentle thoughts and love.

A soul as pure as those that float Around the throne above."

"But earthly things she nothing had, Except this faded flower you see, And though tis worthless in your eyes, 'Tis very dear to me."

—Harry Lynden Flash.

BERKSHIRE BOAR,

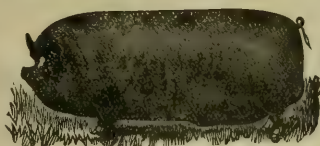
FIT TO HEAD ANY HERD,

FOR SALE.

Breeding Right.

Individuality O. K.

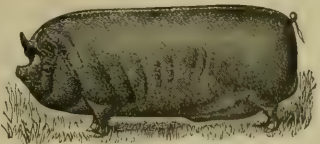
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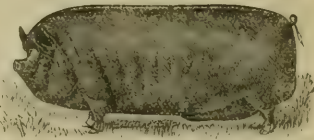
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Boars ready for service. Sows and pigs for sale. Write quick. S. BROWN ALLEN, Staunton, Va.



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MAGAZINES.

The May Century gives full measure, its contents covering many interests and many lands and appealing to a wide variety of tastes. Aside from the illustrations by such well-known artists as Frederic Dorr Steele, C. D. Williams, Thomas Fogarty, Granville Smith, Andre Castaigne, W. L. Jacobs and George Wright, there is color work from Sigismund Ivanowski and Jules Guerin—from the Polish-American artist the frontispiece of the magazine typifying the joyousness of spring; from the French-American artist four drawings, made on the scene, of the chateaux of Loches and Langeais. Of special interest, too, are the portraits, from recent photographs, of seven notable British authors: George Meredith, Mrs. Humphry Ward, Austin Dobson, Andrew Lang, Edmund Gosse, George Bernard Shaw and Gilbert K. Chesterton. And in The Century's American Artists Series is presented Henry Golden Dearth's "Sunset in Normandy."

This issue brings the first of The Century's promised articles on "Great Inventions Described by Their Inventors," Mr. Charles F. Brush telling the interesting history of "The Arc-light." The second of Melville E. Stone's articles on "The Associated Press" relates in detail the story of the removal of the Russian censorship on foreign news, one of the most important chapters in the history of our press. The narrative includes Mr. Stone's interesting interviews with the Tsar, Ministers Lamsdorff and Plehve, and others. There is a second contribution from Dr. Anita Newcomb McGee, recounting her experiences in the hospitals of the Japanese army. "How the Japanese Save Lives" has a lesson for our own War Department, a lesson which Dr. McGee does not hesitate to press home. Richard Whiteing continues his papers on "The Chateaux of Touraine," writer and artist finding fascinating material in ancient Loches and Langeais. There is an account of the recently discovered inland white bear of Northwestern British Columbia by W. J. Holland, director of the Carnegie Museum; and Arthur Hoebner writes of "The Prize of Rome," an article of peculiar interest just at the time that the American Academy in Rome has been newly chartered and handsomely endowed. Henry R. Elliot's discussion of "The World-wide Spiritual Awakening" deals with conditions of general and vital importance.

The fiction of the number, too, is generous in amount and of wide appeal.

In the current number of Lippincott's Magazine the opening novelette, by Ella Middleton Tybout, is placed in the little State of Delaware. So completely charming is "The Turn of the Tide" that it seems likely to be the forerunner of considerable "Blue Hen State" fiction. The love story is

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**SADDLE and THOROUGHbred HORSES,
ABERDEEN-ANGUS and JERSEY CAT-
TLE, BERKSHIRE, POLAND-CHINA, DUROC
JERSEY and TAMWORTH HOGS. ❖ ❖**

**WHITE PLYMOUTH ROCKS, WHITE HOLLAND TURKEYS, PEKIN
DUCKS and PEA FOWLS. Eggs in Season.**

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JOHN R. FAIN, Agriculturist, Blacksburg, Va.

preeminent and absorbing, while the local color and provincial character show an intimate knowledge of the scenes through which the plot winds to a very satisfying (if unexpected) conclusion. Miss Tybout is remembered as the author of an earlier novelle in Lippincott's Magazine, as well as of those popular ducky sketches entitled "Poketown People."

"Braeburn Bonnie," a long short-story of a dog show, is by Ralph Henry Barbour. This is one of the cleverest stories of its kind to appear in any magazine, and no dog-lover, or girl-lover either—should miss reading it. General Charles King contributes one of the kind of stories of fort life in the West which appeals so generally to all sorts and conditions of young people. "A Lass of the Laramie" begins at a dance and ends with the exciting rescue of a soldier by his sweetheart. By a singular coincidence the tale called "Hurt in the Spirit" opens with the words, "The spring was in the land," and goes on to say "It had been a cruel winter, one cold and fickle as to changes." It fits our case so exactly that the good story is sympathetically absorbed. Its author is Elizabeth Cherry Waltz.

The outdoor flavor is strong in the May St. Nicholas; and unfortunate is the girl or boy who does not find much pleasure in these accounts of Mother Nature's fascinating secrets. The first of a series of articles by Edwin W. Foster on "Our Friends the Trees" comes with special timeliness near Arbor Day, and should interest all members of the family. Oaks and maples are discussed this month, with an exceedingly helpful diagram showing minute details of the differences between twenty-one of the more common oaks and maples. H. S. Canfield's "In the World Without a Sun" tells of deep-sea soundings in the Caribbean Sea; and Silas A. Lottridge, the man who gives all his spare

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Ninety-nine out of a hundred farmers do not own a stock or wagon scale. Every man of them admits he needs one and is losing money without it. You buy the best labor saving and money making machines, but you keep overlooking the value of the profit saver.

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Send for Catalogues and Prices.

time to watching birds, recounts his interesting friendship with "The Blue-bird." Joseph H. Adams instructs the practical boy this month how to make boats; and the number brings the first of Dr. Emma E. Walker's valuable papers on "First Aid to the Injured," with simple directions how to care for the burns likely to be received in camp life.

But fiction has not been forgotten in the May St. Nicholas. L. Frank Baum's "Queen Zixi of Ix" goes merrily on its way. The "Pinkey Perkins" story this month is "How Pinkey Delivered an Address." A pretty tale is Empeigh Merwin's "The Birthday of Virginia."

BOOKS AND PAMPHLETS.

The First Book of Farming, by Charles L. Goodrich, farmer, formerly Instructor in Agriculture at the Hampton Normal and Agricultural Institute, Hampton, Va. Mr. Goodrich has had many years of experience in teach agriculture, and is to-day a practical and successful farmer. His book is a most helpful volume, for it really gives the beginner, old or young, a fundamental knowledge of how to conduct a farm with the least expense and largest return. The work may also be used as a text-book for the classroom. Sixty-three full pages of illustrations from photographs. Net price, \$1.00. Published by Doubleday, Page & Co., New York.

The Italian in America, by Elliott Lord, John J. D. Trenor and Samuel J. Barrows. Published by B. F. Buck & Co., 160 5th avenue, New York. The design of this book is to present clearly the contribution of Italy to American development and citizenship.

The A. B. C. of Bee Culture, a cyclopedia of everything pertaining to the care of the honey bee, by A. I. Root. Revised and almost entirely rewritten by E. R. Root. Every bee keeper should have this book.

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Here is a sure cure for colds of any kind. It has been tested repeatedly, and has never failed, and as I used to catch cold, which resulted in a bad attack of bronchitis, I can speak from experience. In cases of pneumonia it will not fail to cure if taken in time. Make a ball of cotton batting about the size of a small marble, saturate it well with alcohol, then drop onto it six drops of chloroform; cover it lightly with a thin piece of cotton batting, hold to the mouth, and inhale the fumes, inflating the lungs well. It will open and expand every lung cell instantly.—Woman's Home Companion.

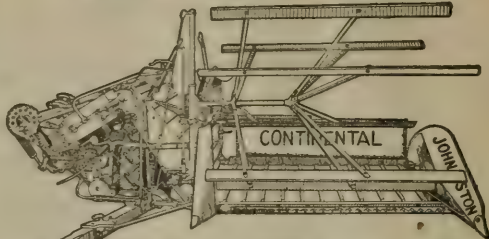
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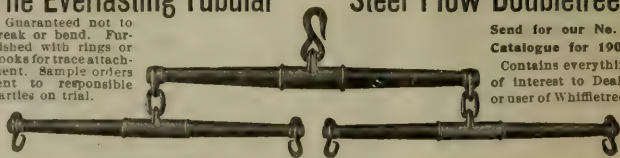
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Harvester Talks to Farmers—No. 5.

The Economy of Buying Farm Implements and Machinery of the Highest Quality and the Best Reputation.

THE question of what make of harvesting machines or agricultural implements of any kind that you pay your hard earned dollars for is one that concerns you more than any one else.

For, you pay for the machine. You have to stand the worry and bother if it breaks when you most need it. You have to stand the loss if it goes to pieces after a few seasons' use.

On the other hand, if you get a good, first-class, durable machine, you are the man who reaps the greatest profit.

For, while the manufacturer is interested to the extent of the profit he makes on the machine, and the dealer is interested to the extent of what he makes by selling it to you, you are interested a full one hundred per cent.—the whole price.

Naturally, then, it behooves you to think over the matter carefully and not take a leap in the dark. You can't afford to run any risks. You don't want to experiment; it is not wise to allow sentiment or prejudice to influence you one way or the other. It's a straight business proposition.

How shall you go about it to determine what line will give you the best satisfaction?

One of the best buyers this country has ever seen, a man who spends hundreds of thousands of dollars every year for his employers, has laid down this rule in buying:

"I look first to the reputation of the article in question and ascertain how generally satisfactory it has been in the past.

"I look secondly to the facilities of the producer and ascertain if he has the ability to make such an article as I am looking for.

"Guided by these two things, I seldom make an error in buying, even in lines with which I am not personally familiar."

That's a good rule, because it's plain, every-day common sense.

Facilities.—Can the manufacturer produce a good article? Has he the means at hand, or is he trying to make bricks without straw? Does he know his business? Has he had the experience necessary to success? Can he produce the necessary materials for the work he has undertaken?

Reputation.—In the slang phrase, "Has he made good?" What do the people think who have purchased his product? Has trade gravitated to his doors? Has his

product given general satisfaction?

That is the way the careful buyer—the man who gets a hundred cents in value for every dollar he spends—judges every proposition placed before him. He is not influenced by sentiment or prejudice; he does not jump at conclusions.

And that is the way we ask you to look at the question before you buy harvesting machines.

When you find a line of machines used by a large majority of the buyers in that line—not only one season, but year after year—you are pretty safe in assuming that that line is giving pretty general satisfaction.

Well, the International line of harvesting machines is used by a large per cent. of the farmers of America.

They buy the Champion, the Deering, the McCormick, the Milwaukee, the Osborne or the Plano, because they know they can depend upon these machines.

They have seen them tried and tested; they have used them themselves, and they know they are right.

These lines of harvesting machines are better to-day than ever before, because the manufacturers have better facilities than ever before for producing them—facilities of greater magnitude and higher quality.

Improved facilities were brought about in the most natural manner in the world—by going to the root of the matter, and becoming independent of the uncertain, unstable, fluctuating open markets for their supply of materials used in manufacturing.

In order to secure call of the right quality at right prices, the manufacturers of the Champion, the Deering, the McCormick, the Milwaukee, the Osborne and the Plano harvesting machines develop their own call mines.

To secure iron and steel of the highest quality independent of the fluctuating iron and steel markets, they operate their own iron mines, their own smelting furnaces and their own steel mills.

In order to make sure that they should have an abundant supply of high grade lumber for generations to come, they own and operate vast forests and lumber camps, cutting the forests in strict accordance with the rules of scientific forestry, and, while thus protecting themselves from the certain danger of a lumber famine, contribute much

to the welfare of the country at large, by helping preserve its sadly needed forests.

In order to provide a cheap binding twine for the use of their customers, they are now developing the flax twine industry—not only providing a less expensive twine, but opening an entirely new market for one of the great farm staples.

And it is not only in raw materials that they have co-operated. In brains as well have they been able to secure common advantages, impossible to them acting separately.

At every point, from the crude ore to the completed harvesting machine set up in the farmer's field of ripened grain they have provided themselves with the best possible facilities—facilities possessed by no other manufacturers in similar lines.

We ask the thinking grain and grass growers of America to consider these things, because they make possible the production of machines which could not be produced in any other way—because they bring to you machines so necessary to your work, of a higher grade and at a lower cost than would be possible under any other conditions.

We point to the reputation of the International line because it is conclusive evidence that thinking farmers—men who are discriminating buyers—have proved to their own satisfaction that these machines are right.

We point to our unequalled facilities as evidence that we shall be able to sustain the reputation made for these machines by long years of careful, conscientious manufacture.

There is another point which should not be overlooked. Throughout this country you will find regularly established agencies for these machines. Each dealer understands thoroughly the machine he represents and carries a full line of supply and repair parts. If you should meet with an accident you know exactly where to get your repairs. You will not find, as is too often the case, a valuable machine rendered useless because of your inability to get a small part which you have broken.

Call on the International dealer. He will be glad to answer any questions, to give you catalogues and furnish any information concerning the line he represents.

See previous Harvester Talks in March and April issues of this paper.

The International Harvesting Machines,

Champion, Deering, McCormick, Milwaukee, Osborne and Plano,

You Are Offered

THE QUALITY which comes from the world's greatest facilities in manufacturing.

THE ECONOMY which comes from stable, uniform cost of materials.

THE SAFETY which comes from a well established, permanent institution.

THE CONVENIENCE which comes from separate agencies everywhere and repairs all ways on hand.

You cannot afford to overlook these advantages.

They are not offered you in other lines of harvesting machines.

Remember, The International Lines are Represented by Different Dealers. See them for catalogues.

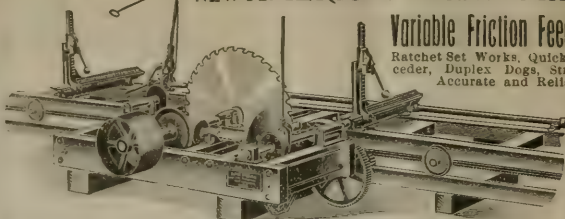
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REPORTS.

- U. S. Department of Agriculture, Bureau of Animal Industry, Washington, D. C. Bulletin 68. Information Concerning the Milch Goats.
- Bureau of Animal Industry. Bulletin 69. The External Parasites of Hogs.
- Biological Survey. Bulletin 20. Coyotes in their Economic Relation.
- Office of Experiment Stations. Experiment Station Record. Vol. XVI. No. 7.
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- Bureau of Entomology. Circular 57. The Greenhouse White Fly.
- Bureau of Entomology. Circular 58. Report on the Gypsy Moth and the Brown-tail Moth. July, 1904.
- Bureau of Entomology. Circular 59. The Corn Root-Worms.
- Bureau of Forestry. Circular 33. What Forestry Means to Representative Men.
- Bureau of Plant Industry. Bulletin 73. The Development of Single Germ Beet Seed.
- Bureau of Statistics. Bulletin 31. Imports of Farm and Forestry Products 1901-1903.
- Bureau of Statistics. Bulletin 32. Exports of Farm and Forest Products 1901-1903.
- Farmers' Bulletin 213. Raspberries.
- Farmers' Bulletin 215. Alfalfa Growing.
- Farmers' Bulletin 218. The School Garden.
- Farmers' Bulletin 219. Lessons from the Grain Rust Epidemic of 1904.
- Farmers' Bulletin 221. Fungous Diseases of the Cranberry.
- Proceedings of the Third Convention of Weather Bureau Officials, session 1904.
- Idaho Experiment Station, Moscow. Idaho. Bulletin 46. The Grape Phylloxera.
- Bulletin 47. Pruning the Apple Orchard.
- Report of the Director for Year Ending June, 1904.
- Press Bulletin, April, 1905. Indian Corn in Idaho.
- Illinois Experiment Station, Urbana. Ill. Bulletin 93. Soil Treatment for the Lower Illinois Glaciation.
- Kansas Experiment Station, Manhattan, Kas. Bulletin 126. Experiments with Hand-fed Calves.

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Variable Friction Feed
Ratchet Set Works, Quick Re-
ceder, Duplex Dogs, Strong,
Accurate and Reliable.



Best Material and Workmanship, LIGHT RUNNING, Requires Little Power, Simple, Easy to Handle, Won't Get Out of Order.

**With 4 H. P. Steam or Gasoline Engine Guaranteed to Cut 2,000 Ft. Per Day
\$150 Buys It on cars at factory, Freight Very Low.**

Seven Other Sizes Made. Also Edgers, Trimmers, Shingle Machines, Lath Mills Rip and Cut-Off Saws, Drag Saws, Cord Wood Saws and Feed Mills. Catalogue Sent Free.

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Why the 20th Century is one of the best investments a farmer can make; why it saves time, money, patience, and increases the farmer's bank account; why it is durable, strong, needs few repairs; how it withstands hard usage without harming it; how it increases the fertility value of manure, how it advances the market value of every square foot of ground it runs over, these, with a hundred and one other questions vital to every farmer, are answered in our handsome, new, free catalog No. A-20. Write for it. Read it.

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Is on. A light dusting is sufficient, and woe betide the bugs or the larvae. Once they get a taste of it they shrivel up right away.

Sold by Seed Dealers and Merchants all over America. **GEORGE STANDEN, Gardener to Col. D. S. Lamont, Millbrook, N. Y., 1904.**

Send for Pamphlet on Bugs and Blights to **BENJ. HAMMOND, Fishkill-on-Hudson, N. Y.**

Hammond's Slug Shot for Potato Bugs.

TO THE EDITOR OF AMERICAN GARDENING:

In your issue of June 18, on page 399, I notice a good article on the Colorado Beetle or Potato Bug. For the benefit of your numerous readers, I would advise them to try **HAMMOND'S SLUG SHOT**. I have used it here this season with excellent results, on Potatoes, Egg Plants, Cucumbers and Squash—for Potato Bugs, and also for Striped Beetles, and it is the best remedy I know of, simple and effective. I purchased two of the **DUSTERS** which he advertised in your paper, and they are very useful articles. The best time to dust the plants is early morning, as the substance adheres much better when the dew

Louisiana Experiment Station, New Orleans, La. Analyses of Commercial Fertilizers and Paris Green.

Results of Experiments in Production and Marketing Fruits and Vegetables and Canning Fruits and Vegetables at North Louisiana Experiment Station, Calhoun, La.

Michigan Experiment Station. Bulletin 222. The Codling Moth in Michigan.

Missouri Experiment Station. Bulletin 65. Grain Rations for Dry Lot Hog Feeding.

Circular of Information No. 19. Suggestions for Missouri Corn Growers.

New York Experiment Station, Geneva, N. Y. Bulletin 259. How Much Meat Shall Ducks Eat.

Ohio Experiment Station, Wooster, O. Bulletin 150. Chemical and Mechanical Analyses of the Soils Under Experiments. Types Represented. Discussion of Results.

Bulletin 156. Tobacco Diseases. Tobacco Breeding.

Bulletin 157. Winter Killing of Peach Trees.

Bulletin 158. Forestry Investigations.

Bulletin 159. The Maintenance of Fertility. Liming the Soil.

Pennsylvania Experiment Station, State Coll. Pa. Bulletin 70. Condimental Tonic and Other Stock Foods.

South Dakota Experiment Station, Brookings, S. Dak. Bulletin 90. Tankage and Other By-products for Pigs. Shrunken Wheat for Swine.

Bulletin 91. Co-operative Vegetable Tests in 1904.

South Carolina Experiment Station, Clemson College, S. C. Bulletins 94, 97, 98, 100, 101, 102, 104, 106 and 107. Analyses of Commercial Fertilizers.

Bulletin 96. A Chemical Study of the Tea Industry in South Carolina.

Virginia Experiment Station, Blacksburg, Va. Annual Report 1904.

Bulletin 150. The Composition of Cider as Determined by Dormant Fermentation with Pure Yeasts.

Bulletin 151. Apple Production in Virginia.

Bulletin 152. Experiments with Caustic Soda and some Patent Washes Against the San Jose Scale.

Bulletin 153. The Horn Fly.

Virginia Weather Service, Richmond, Va. Report for February, 1905.

Wisconsin Experiment Station, Madison, Wis. Bulletin 119. A Report on Cranberry Investigations.

Bulletin 120. Concentrated Feeding Stuffs and Fertilizers Licensed for Sale in Wisconsin.

Bulletin 121. Alfalfa.

Bulletin 122. Licensed Commercial Fertilizers and Feeding Stuffs 1905.

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Contains no tar or paper; will not melt, rot or tear. Acid fumes will not injure it.

Outlasts metal or shingles. Any handy man can apply it.

There is only one Ruberoid Roofing, and we sell it. You can verify its genuineness by the name on the label and on the under side of every length of Ruberoid Roofing. Send for samples and booklet.

A large stock of Corrugated and V Crimp Roofing always on hand.

Southern Railway Supply Co.,
1323 East Main Street,
RICHMOND, VA.

\$100.00 in Prizes To Corn Growers.

We wish to introduce to the Southern Planter readers, the remarkable fruitful

Battle's Prolific Corn

which has made such magnificent yields, wherever used.

We offer cash prizes, of \$50, \$25, \$15 and \$10 respectively, for the best corn grown from this seed. Each planter entering the contest is to send us 50 ears, not later than November 15th. The judges will then decide among what four farmers the \$100 will be divided, in the above amounts.

The judges are; Dr. C. W. Burkett, West Raleigh, N. C.; Mr. T. B. Parker, S. B. A., Raleigh, N. C. and Col. J. S. Carr, Durham, N. C.

Even if there were no prizes offered, your increased yield of excellent corn would fully repay you.

Small packages of this seed 10 cents; large packages containing one pint, 25 cents. 10 cents may be the means of you winning \$50.

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SOUTHERN SEED CO., F. G. Battle, Mgr., Durham, N. C.

THE TIME THAT TRIES THE TRUCKER.

Editor Southern Planter.

The trying time of the truckers and market gardeners in the great trucking belt around Norfolk, Va., seaport is not, as many may think, in mid-summer; because the summer time in this section is a splendid mixture of sunshine and showers.

It is not in the autumn, with its "mild Indian Summer" period, which often extends away past the holidays; nor yet is the winter a trying time, because the winter vegetables standing in the open air are hardy and stand up nicely under the degree of frost to which this section is generally subjected. The winter work of plowing, planting and transplanting goes right along generally upon an "even keel," but the spring with its fickleness is the trying time.

Spring is sunshine and tears, hot and cold, wet and dry, all mixed in a sort of heterogeneous mass. The "full moon period" in April is the particular time which tries the truckers the most thoroughly of any period in the year. The frost which generally closely accompanies that "full moon period" is the one frost of all the year, which is most dreaded and feared.

March this year was two degrees per day warmer than the normal or natural average temperature for the month. This put the growing crops a little farther ahead, and this encouraged early planting, and the section was in the right kind of shape to feel a frost. The "full moon," however, was late in the month and we had reason to believe we would escape damage; but it seems that we had not properly diagnosed the case, and April frost has injured us somewhat.

At the present time, however, no one seems to know how badly we are hurt. Some place the damage to potatoes, snap beans and berry crops at 25 per cent. If that is all then the crop will pay just as well as if there had been no frost. A full crop of berries, potatoes and snaps will not bring as much clear profit to the grower as three-fourths of a crop. This looks a little as if we were growing most too much of the market, garden and trucking crops.

Here and there we hear of more serious damage than 25 per cent, and then again we hear of many who report no damage whatever, at least none that can be observed.

The cabbage, lettuce and pea crops were not injured at all. Of this we



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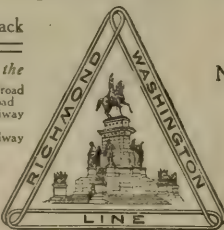
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The Implement Co. Sales Agents, Richmond, Virginia.



are sure, and we feel confident that the loss to the other crops will not be more than 25 per cent. This is based upon talks to truckers, middle men, transportation men, newspaper reports, etc.

There is no doubt but that when it comes to shipping time we shall find plenty of berries perhaps not enough to glut the markets), enough snaps and enough potatoes. Farther south the tender crops were more in evidence and the injury, therefore, was greater. Farther north the tender spring crops were not up at all.

To sum it up as it seems at present. We may possibly be damaged 25 per cent. that is to say, have lost 25 per cent. of the three crops named, but even in that case we have reason to expect fully as much profit as from a full crop at correspondingly lower prices. Farther south, where crops were further advanced, the damage may have been and probably has been greater.

It is human nature, however, to magnify the results from such causes, and many people are very sure that they are seriously hit, injured and even ruined, who find themselves emerging from the ruins, a little later on, all "O. K." and right side up with care.

We have reason to believe that it is often the case that where nature kindly "curtalls the output," especially in the trucking business, more money eventually finds its way into the farmers' pockets than if he had his own way, and raised so much farm produce that there would be no market for the same at living prices, in which case both the producer and consumer would suffer, because action and reaction are always equal and follow each other regardless of the individual efforts of man.

One noticeable feature of the frost is this. Almost unanimously the statement comes in that the truck fields and patches near to salt water escaped with but very slight, if any, damage. The salt water aiding materially in keeping off the frost. On the lower darker soils the frost was most damaging, much more so than on the higher dryer sandy loam soils.

In about ten days we shall be able to report fully as to the amount of damage sustained by the three crops named, but it will take until the crops are sold to determine the actual damage. In the case of serious damage to any of the spring crops, they are plowed under at once, the only real damage or loss being for labor and seed, as the fertilizer, if any was used, is still in the land for the use of the succeeding crop.

A. JEFFERS.

Norfolk, Va.

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Keen Kutter Tools are without reserve or qualification the best tools that money, brains and skill can produce. No matter how much you pay, no matter who you may have thought to be the best maker of a particular kind of tool, you cannot get any tool, anywhere, better than those sold under the name of Keen Kutter.

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FISH FARMING.

Eastern Virginia is so indented with arms of the sea, so intersected, bisected and dissected, as it were, that it is hard to understand where one is at except by careful study and keeping the "points of the compass" always in mind.

The lower Chesapeake and its tributaries comprise about twenty-five hundred square miles of salt waters; but the shore line, bounding these twenty-five hundred square miles of water must be fully five thousand miles in length if it were all straightened out in one straight continuous line.

Eastern Virginia consists of a wonderful combination of land and water. There are eight large, and hundreds of smaller peninsulas, points or bodies of land almost surrounded by water. These twenty-five hundred square miles of salt waters are literally flooded with clams and oysters; literally filled with fish and crabs, and literally covered with the fishing fleets.

The best of it is that these wonderfully productive waters are free from ice, and the oystering work goes on steadily all winter, with but slight interruption on account of cold weather.

Just now the shad fishing season is on. This week the Old Dominion local steamers were loaded with shad from Mathews county, bringing down from two hundred to four hundred barrels per day; and on at least one trip reaching as high as five hundred barrels. These shipments represent only those made from the southern side of Mathews county. The great fishing grounds at the northern end of the county send fully as many more fish from the northern side of the county to Baltimore.

Just think of eight hundred to one thousand barrels of fish going to market in one day from one small county in Eastern Virginia. Then again think of the hundreds of other fisheries all over Eastern Virginia, contributing to the great flood of fish going to market.

The fisheries right adjacent to Virginia Beach summer resort have been known to send four hundred barrels of fish to market in one day. Among the numerous other kinds of fish now being taken from these waters is the sturgeon. This fish may be truthfully called a water hog; reaching as high as three hundred to three hundred and fifty pounds in weight. It fattens and feeds on mud bottoms in the rivers and inlets of Eastern Virginia. We have often seen dozens of these in market, weighing all the way from one hundred to three hundred pounds each. Yesterday our attention was called to a good sized sturgeon which brought thirty dollars cash. The roe (eggs) in said sturgeon selling for twenty dollars. The great advantage of the fish crop is this. It requires no feeding or fattening from the hand of man. In other words a million dollar crop of fish costs man absolute-

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IF YOU buy a buggy with your eyes shut, you will get a bad bargain every time. A buggy may look all right today and go all to pieces inside of a year. You wouldn't think of buying a horse with your eyes shut. You would look at his teeth to find out his age, wave your hands before his eyes to see if he had good eyesight, look him over for spavins and ringbones and "size him up" generally to be sure he was sound. Then you would drive him at a good gait to see if he was wind broken. Why not be even more careful in buying a buggy? We are selling our famous **SPLIT HICKORY Buggies** on a new plan, which allows the buyer to "try out" the vehicle as he would a horse, before concluding the purchase. Here is our offer made in absolute good faith to any responsible person.

WE WILL SHIP OUR 1905 SPLIT HICKORY SPECIAL TOP BUGGY, THE PRICE OF WHICH IS \$50, ANYWHERE IN THE UNITED STATES ON 30 DAYS FREE TRIAL. GUARANTEED FOR TWO YEARS

We will tell you exactly how it is made, giving complete specifications, so that when you receive the buggy you can go over it part by part, and check up every item. You can compare it with buggies sold in your neighborhood for nearly twice as much money. You can hitch up to it and use it just as though it were your own and if you do not find it just as represented, you can ship it back to us at our expense and your money will be refunded. The Fourth National Bank of Cincinnati, O., will tell you we are responsible for our contracts and agreements and that you may be assured of fair and honest dealing.

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ly nothing except the cost to harvest and market the crop.

The Gulf Stream which flows past our doors, warms all these waters here and makes of them the greatest nursery of the sea" known to the civilized world. The waters of the Gulf Stream stand at a temperature of seventy degrees the year through. In these waters the finny tribes feed, fatten and flourish. By the millions they run into the Chesapeake and its tributaries to spawn, and the fishermen by the thousands, with hook and line, and seine, and pot and pound, are busily engaged in harvesting the crop the greater portion of the year. Cut off the supply of meat from nature's meat barrel and the "Big Four" of Chicago would doubtless advance the price of beef and pork within twenty-four hours. Sea meat is the most healthful meat in the world. This supply seems to be unlimited. It is a crop which, although continually harvested, is still always on hand. Its value to Eastern Virginia alone runs into the millions of dollars.

A. JEFFERS.

Norfolk, Va., April 13, 1905.

EARNED HIS PAY.

The late "Manny" Friend thus described one phase of the law's mysterious workings:

"The counsel for the defence told me this story long after the case was forgotten. A man was on trial for murder in a small Western city. Testimony of the most incontrovertible and damaging sort was piling up against the accused. Despairingly the prisoner's counsel made his closing speech, in growing misery he listened while the prosecution ruthlessly rent asunder his fragile fabric of defence and while the judge 'summed up' strongly against his client.

"As the jury filed out the verdict of 'murder in the first degree' seemed stamped on their faces. The prisoner's counsel managed to whisper to the foreman in passing:

"Five hundred dollars if you make it manslaughter!"

"For two interminable hours the jury remained closeted. At last they filed in and the foreman glibly handed up the desired 'manslaughter' verdict.

"I tell you!" exclaimed the foreman, later, as he pocketed the defence's five hundred dollars. 'I had a lot of trouble earning that cash. The other eleven all held out for acquittal, and it was a couple of hours before I could talk them around to 'manslaughter!'"—Lippincott's.

Rock Island Co., Ill., 4-13-05.

Your paper is all O. K. and I do not want to be without it. JULIUS LINKE



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Times-Dispatch (without Sunday)	3 00	3 00
News-Leader, Richmond, Va.	3 00	3 00
The Post, Washington, D. C.	6 00	6 00
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Central Presbyterian, Richmond, Va.	2 00	2 25
Religious Herald, Richmond, Va.	2 00	2 25
Southern Churchman, Richmond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	2 00	1 50
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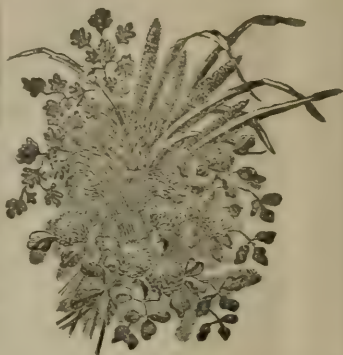
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We cannot under any circumstances furnish sample copies of other publications.

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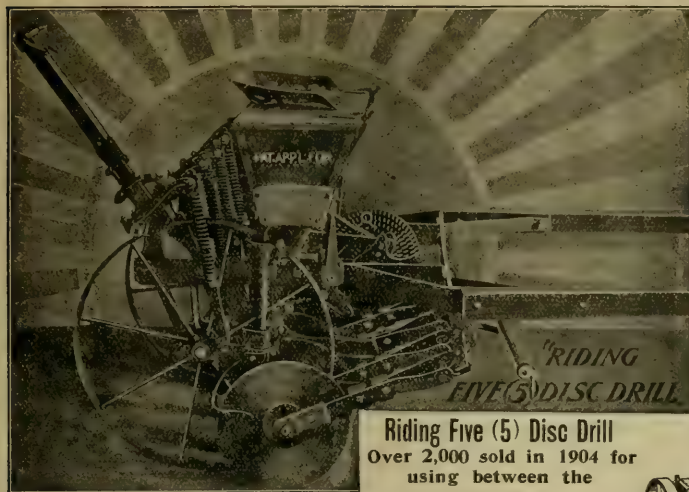
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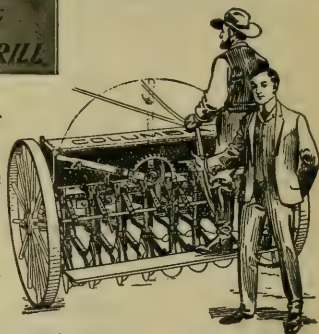
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Just as we go to press, we are advised by Mess. D. Y. Hallock & Sons, York, Pa., that they have at last hit upon a plan to build a one side elevator potato digger. This firm has been making potato diggers for 20 years, but have never been able to perfect a machine that would dig potatoes entirely satisfactorily while the vines are green. They write us that they are now quite sure of their success in this direction.

Numbers of our readers will probably be interested in this announcement and we suggest that they write to the above firm for circulars, prices and illustrations, which will be ready by the time this notice appears. There is no doubt in our mind that a really successful potato digger is a money maker for its owner. We there urgently request potato growers to investigate the merits of this new digger at once.

Pittsylvania Co., Va., 4-6'05.

I read the SOUTHERN PLANTER with great interest and only wish every farmer in the State would take it and read it. It would make a great improvement along all farming lines I feel sure, if they would read it.

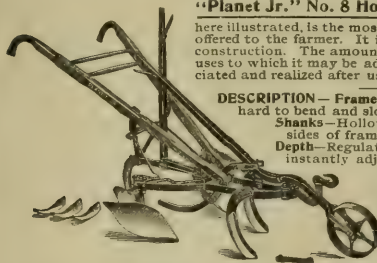
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41-51 Union St., Norfolk, Va.

THE CORSET AND THE GROWING GIRL.

This time I am going to take advantage of my privileges as a trained nurse, and put in a plea for the deliverance of growing girls from corsets. The corset-made figure is an ugly one at best, but if grown persons elect to exhibit themselves in that form one cannot well prevent it. They have, at least, ceased growing, but it is a shame to allow a young girl to so deform herself. From fourteen years up, the child's body begins to take on the fashion and functions of the adult, and it is said that the change is not absolutely completed until the twenty-fifth year. In view of this statement, it is surely not pulling the lines too tight to say that absolute freedom should be allowed until the twenty-first year. The natural supports of the body are the muscles of back, chest and abdomen. They are fully competent for this task if not interfered with. If they should fail, the proper treatment is exercise, to develop and strengthen them. The woman whose muscles are strong and whose body is upright has usually a beautiful form, and often a slender waist. The chief attraction of corsets seems to be that they reduce the size of the waist, and this, of course, they can be made to do, at the expense of stomach, liver, lungs, etc. As a matter of fact, those who are built on the plan that permits a small waist retain it much more surely and gracefully by the help of

exercise and strong, plant muscles than by corsets. There are some persons who are not built in such a way as to be entitled to a small waist, but they can, at least, be straight and well proportioned, and even graceful, with the grace of perfectly-functionary muscles. A girl who has worn corsets will say that she is comfortable in them, and needs the support, etc., etc. Of course, this is so. She has relieved the muscles from doing their proper work, and they have become weakened and unable to do it, and will never recover the power while she wears the corset. The young figure, too, has followed the line of least resistance; in other words, has adapted itself to the corset shape, so that the girl feels no particular inconvenience. She has gradually become accustomed to the weakened muscles and deformed shape. Girls, it is true, are sometimes shapeless and clumsy during the growing period, but the remedy, even from an aesthetic point of view, is not corsets, but freedom of movement, exercises and walking in the fresh air, with the chest up and lungs full. I have a great respect for the woman who, having a naturally stumpy figure, has respected it, and kept it straight and strong and in good order; not much for the person who, in connection with large hips and broad shoulders, has cultivated a corset-made waist. What is more distressing to see than the young girl with the old

face, corset-made woman's figure, and dress to match, who is still young enough for short skirts, and often combines them with the other items. If corsets are worn at all, by anyone, they should be made to fit the individual's form as it is, not as the corset makes or someone else thinks it ought to be. When a girl reaches the age of twenty-one, having paid due respect to her body, so that her muscles are strong and vigorous, the chances are that she will find corsets intolerable. If, however, she elects to wear them, she cannot do herself the same amount of harm that she might have done had she begun seven years earlier. Young girls, in these matters, usually follow the mother's advice, and it seems to me that few of her duties are clearer than to uphold and advise that course which tends to secure to her daughters' perfect adult bodies, as well as cultivated minds. There is a want of dignity in the woman who sacrifices her body to appearances and the fashion of the day, and there are few who do not look well if they take pains to choose the clothing that is suitable and looks well on them, rather than something which may be pretty and fashionable as worn by some other woman, but entirely unsuitable to their own individuality. I have yet to see the woman who cannot look well without the aid of corsets.—A. G. Owen, in Farmers Advocate.

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These f. o. b. here. Drayage free. No charge for packing. Remittances must accompany all orders.	

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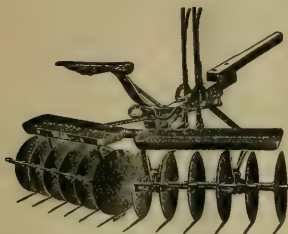
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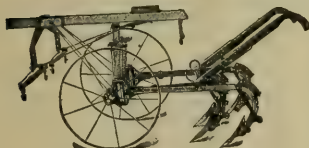
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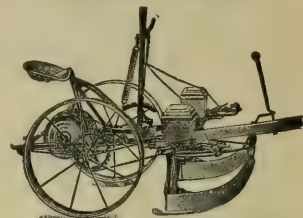
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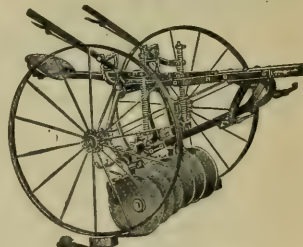
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Mrs. Bronson, who gave him his board and wage in return for hypothetical work, had vowed many a time that she "jes' wouldn't have that nigger around if she knew where she could get another," but somehow Billy stayed. At last, after the advent of a new girl in the kitchen, Mrs. Bronson noticed a reformation in her pet. She could not account for it until, being in the yard one day, she heard the cook calling him from the kitchen. Billy was in the barn.

"Say, yo' worthless trash," the cook was calling, "did you eech kiss a real black culled lady?"

Billy raised his head and grinned.

"I shuah done so," he answered.

"Wel, den, when you done fetch in an ahmful of wood I'm goin' to give you a chance to kiss another."

Billy waited on no second bidding, and Mrs. Bronson held the secret of the change. The cook knew how.—Lippincott's.

Nelson Co., Va., 4-10-'05.

I would not do without the SOUTHERN PLANTER for three times the subscription. P. P. GANTT.

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Gordonsville, Va.

IN THE SOUP.

An American lady went into a French hair-dresser's establishment in Berlin to get a shampoo. The proprietor was a tall, thin man, with all the grace and suavity of a dancing-master. He came forward in haste as the door opened.

"Ah, Madame weeshes a treatment for ze scalp. Oui, yes," said he, bowing low with a wide sweep of the hand.

"Yes, and I have my own notions about how it should be done," replied the lady, glancing doubtfully about the room, as if she felt she was putting herself into the hands of irresponsible strangers. "Where do you keep your preparations, sir?"

"Ah, ze ingredients—they are here, Madame," said the artist, leading the way to a marble slab affixed to the wall at the back of the room, upon which there stood a long line of bottles and jars.

The lady recognized many of the preparations, and thus regained much of her assurance.

"Is Madame ready?" asked the proprietor.

"No, wait, if you please. First, I want some of that," she said, pointing to a bottle.

The hair-dresser nodded. "It ees my pleasure, Madame."

"And then you may rub in some of that," She pointed to a jar of a familiar lotion.

"Oui, zat will be excellent, Madame," she went on, indicating an open bowl, which contained a thin, brown liquid. "Mais, non!" cried the other. "Madame does not weesh it!"

"Yes, I do!" replied the lady, sharply.

"But, Madame—"

"Do as I say, if you please," she interrupted in a vexed tone.

The proprietor shrugged his shoulders, but he did as he was bid. Everything went well, except that the brown liquid did not smell just as she had

expected, and produced a curious sensation of warmth as it was applied.

"Wasn't that brown liquid a shampoo mixture?" she asked with growing doubt as he finished.

"Non, Madame," he replied politely; "I put it on because Madame ineseets. But, you see, I was eating—what you call it?—lunch when Madame came. Zis bowl contained my soup, Madame!"

—Lippincott's.

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Chestnut horse, 15½ hands, weight 1,050 pounds. Sired by Virginia Chief, 27267; dam Barbara, by Alcantara, 729.

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TIDEWATER NOTES.

Editor Southern Planter:

We are just enjoying the last kicks of old winter. I see by reference to the weather reports issued by the government that the winter has been the most severe, or, rather, has shown the lowest average temperature of any winter since the government weather service was established here.

It has been four-tenths of one degree colder than any other winter recorded. The winter of 1903-'4 was the next coldest. So that we have had two of the "coldest" on record in succession. To sum up the weather, it has not been so very, very bad. The coldest has been three days, when for a short time, early in the morning, the thermometer registered 12 above zero. The cold has not been extreme, but we may be pardoned the pun for saying that, while we have had no extreme cold, the "mean" cold has beat the record.

We have examined several fields of cabbages recently, which were set out in November last, and which have come through the winter in fairly good shape, the percentage of loss being very small indeed. We have also examined the lettuce, which also stood out in the open air and came through without much damage.

The acreage in kale and spinach put out last fall was much larger than usual. About half the acreage was put out early for winter shipment, and that part was nearly all shipped away be-

fore it was at all damaged by the cold weather. The yield was very fine, indeed, fully as large as recorded, and the price was fairly well up, ranging from \$1.50 per barrel for spinach up to \$4.

The spinach sowed for later shipments has been somewhat injured, as it was young when frosted. It was not killed, but was cut back pretty severely. A few warm days and an application of a good fertilizer will bring out the late spinach in good shape.

The potato crop was not planted in February this year. That month is the month when it is usually planted. Some planting was done in February, but the bulk of the Irish potato crop was put into the ground the first ten days in March. We believe that the acreage planted is not quite up to the average.

There has been but very little snow, and that which fell did not last long. The ice has not troubled us here. There has been no time when the channel leading into our harbor was frozen over. The ice has always been floating with the tide, and consisted of cakes of ice floating down from up the bay or from the James, Potomac and Rappahannock rivers.

The flood-tide carried the ice down into the lower Chesapeake Bay, and then the ebb-tide takes it in tow and carries some of it into Hampton Roads, and the approaches to Norfolk harbor, sometimes for an hour or so almost choking the channel, but not sufficiently so to stop the movements of vessels.

Peas and radish are now being put into the ground rapidly, and the work of spring is upon us. Every team and farm hand is in active motion.

A. J. JEFFERS.

A POCKET MANUAL OF PLANT DISEASES.

This is the title of an interesting pamphlet issued by Mr. Jas. Good, of Philadelphia, the well known maker of whale oil and disinfecting soaps. This pamphlet is well worth having, inasmuch as it treats very concisely on plant diseases, whether parasitic or fungoid, their prevention and treatment.

Mr. Good has been advertising with us for a number of years, as hundreds of our readers well know. He will be very pleased to send the booklet to any one asking for it.

"MAKING A HOG OF ITSELF."

I think this will interest some of your subscribers, showing what a glut-ton a hog can be.

The other day I fed my pigs and one, a shote of six months old, which had been in the habit of being fed with others, got to a pail of slop intended for a sow with pigs and in five minutes devoured the contents, which so bloated it that it died inside of three-quarters of an hour. It was so strained that its rectum protruded.

Fairfax Co., Va. F. A. YONGE.

How is Your Wheat?

ONE CENT Invested in a postal card and addressed to
THE CARDWELL MACHINE COM-
PANY, Richmond, Virginia, will bring you circulars regarding

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They are SIMPLE, DURABLE and EASY TO WORK.

Capacity, 200 to 1,000 bushels of wheat per day, according to size and character of grain.

THE CARDWELL MACHINE CO., Nineteenth and Cary Sts.,
 RICHMOND, VA.

SOME POINTS IN SEEDING.

The planting season is now upon us, and farmers are trying to solve the annual problem of buying seed. If they would only learn to purchase seeds early a great saving could be effected, for the price rarely falls to go up 25 to 35 per cent. about planting time. This is an enormous interest to pay for the use of money only six weeks or two months. The business man would take advantage of such a fine opportunity for profit, but the farmer rarely does. No wonder he complains of his hard luck!

I think one trouble with farmers is that they do not usually plan their work in advance. They do not know just what crops they will pitch until they get right up to the time for planting. Then they are at the mercy of the seed merchant. Of course, unfavorable weather may knock us out and leave us with seed on our hands, but not often.

I have noticed another point in which farmers seem to me "cent wise and dollar foolish." They refuse to plant a certain crop because seeds happen to be high. A little sound thinking will show the fallacy of this policy. Suppose it would cost a dollar extra for seed enough to thicken up a thinly set meadow. The additional hay mowed the following year would probably be worth more than twenty times the cost of the seed. I have seen farmers refuse to put in sweet pota-

toes because seed were twenty-five to fifty cents higher per bushel than usual, and by saving fifty cents they, perhaps, lost forty dollars. The seed is but a small part of the full cost of a crop, and should never stand in the way of planting. The chances are that so many farmers will be deterred from planting when seed is costly that the crop for that year will be short and prices high, so that it will be very easy to make back much more than the extra cost for seed.

How many farmers who read this ever prepared to plow up a good stand of grass by being in too big a hurry? None, you say, but hold on! In good time last fall I sowed about four acres of red-top. The weather turned dry, and continued so until freezing weather came on. If any of the seed ever came up I did not see it. The weather was so uniformly cold during the whole winter that there was no chance for seed to sprout. For some time after winter broke and warm weather succeeded, the ground remained bare, and I gave up my grass crop for a failure. I supposed that, if the seed had sprouted, the dry weather in the fall killed them, and that if they had not sprouted, they had perished during the extremely cold winter. So I bought seed and a new harrow, preparatory to resowing. Fortunately, before beginning the work, I sent a hand down to examine the field again, and, behold, my grass was coming up "as thick as hops."

T. C. KARNs.

A LOVELY ERRAND.

He was a cherubic youth of four, with a beautiful, blue-eyed countenance and an angelic smile—the kind of boy that honest persons long instinctively to kidnap. He sat on the fence, swinging his heels and humming a kindergarten song.

"Oh you darling!" cried an impulsive young woman, pouncing upon him and giving him a hug. "Has your mother any more like you? Have you any little brothers?"

A GOOD REASON.

Willie had been naughty and his father was going to whip him.

"My son," he said sternly as, switch in hand, he confronted the lad, "do you know why I am going to whip you?"

"Yes, dad," replied the little fellow, "it's because you're bigger'n I am."—May Lippincott's.

AN ALPHABETICAL MARVEL.

Little Irma had been on an excursion to her father's down-town office and saw for the first time a type-writer in use.

"Oh, mamma," she said on her return home, "don't you know, I saw the funniest sewing machine down to papa's office. It sewed A, B, C's!"—Lippincott's.

Mention the SOUTHERN PLANTER in writing.

The Power Behind the Style

In other words, Quality is what gives the customer real satisfaction and the dealer a trade he can look forward to. But in these days of so many imitations it is sometimes hard to tell the false from the true.

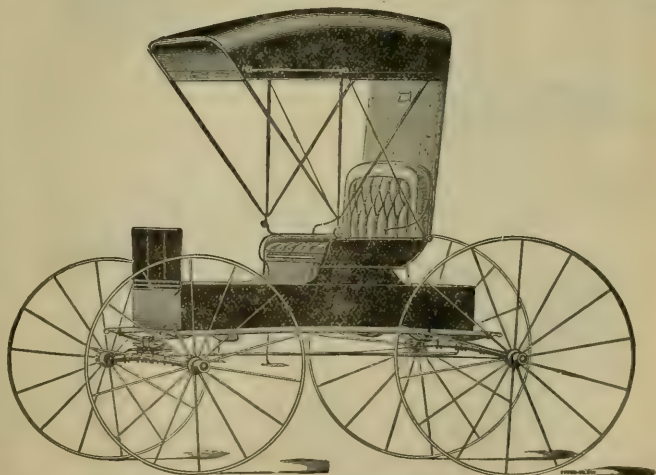
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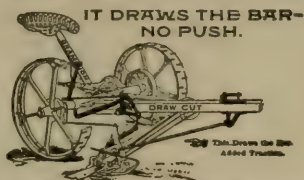
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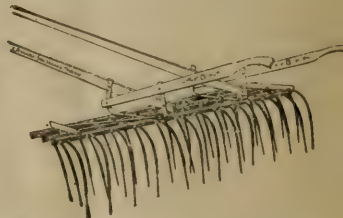


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The Southern Planter.

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PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,
TRUCKING, LIVE STOCK AND THE FIRESIDE.

Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

66th Year.

Richmond, Va., June, 1905.

No. 6.

Farm Management.

WORK FOR THE MONTH.

The abnormally cold weather of April, which we commented on in our last issue, continued up to the end of the month, and caused a distinct setback in crop conditions all over the country, and much delayed the seeding and planting of staple crops, the ground having in many sections, especially of the South, become too hard to plow and break well. With the opening week of May a genial change occurred and warm, showery weather has been the rule since that time to the date of this writing (20th May). Whilst in most sections of this State and of the South Atlantic Coast States generally the rain has only been partial and local, yet in other sections some very heavy rains have fallen, and these have been accompanied by high and destructive winds and floods. On the whole, the month so far has been one favorable to the progress of crops and planting, and there is every prospect of a good crop year. The condition of the winter wheat crop throughout the country still continues highly favorable. The area which has had to be plowed up or abandoned from deficiency of stand is comparatively small—only about 1,500,000 acres—leaving the standing crop nearly 3,000,000 acres more than the area of winter wheat harvested last year. The average condition of the crop on May 1st was 92.5, as against 76.5 a year ago, and as against a ten year average of 83.7. The average condition in Maryland is 92, as against 76 a year ago; in Virginia 89, as against 73 a year ago; in North Carolina 91, as against 83 a year ago; in South Carolina 89, as against 80 a year ago; and in Tennessee 90, as against 81 a year ago. The in-

creased area and the high average condition throughout the country would indicate an increase of nearly 100,000,000 bushels in the crop, assuming favorable weather conditions up to the time of harvest. Since the report of the 1st May less favorable weather conditions in the West have doubtless somewhat impaired the average condition, and there are reports that damage is being done by Hessian fly in some States. A continuance of the warm, damp weather we have had would also doubtless result in rust in many sections. Spring wheat seeding in the Northwest has been considerably delayed by bad weather, and the prospect for any considerable increase in the acreage of this crop does not appear promising, whilst much of that seeded early has been damaged by frost. Winter oats have improved in condition during the past month, and except in sections where badly injured by winter killing or drouth, promise a fair crop. Spring oats are late, and this crop, when late, rarely amounts to much. Grass and clover for mowing and pasture has made good growth during the past month, and there is promise of a fair hay crop and good grazing for stock, though in some parts of the Valley of Virginia and Southwest Virginia some injury has been done by drouth.

The planting of the corn crop has made considerable progress, and but for the showery weather of the past ten days would have been practically finished in this State. The early planted has come up to a good stand in most places, but we hear some complaint of injury from cut worms. River lands are now too wet to plow or plant, and some delay will be caused

by this, but on these lands it is never safe to plant too early, as the risk of damage by floods is great. If got in by the 10th June corn is always sure of a season long enough to mature it on these lands. No time should, however, now be lost in getting to work preparing and planting the crop. We would strongly urge the practice of plowing and fitting the land for the seed right away. Plow a few acres and then put the teams to the harrow or cultivator and break down the clods before they have time to bake and harden. Time and labor will be saved in this way. When a large area is all plowed before any of it is fitted for the seed some part of it is very apt at this late period to become too hard baked to break down into a fine seed bed without much labor, and much needed moisture is lost in fitting such land. Use care in the selection of the seed to be planted, and see that it is of good germinative power. The work of cultivating the corn crop is one that should have constant attention this month. In our last issue we wrote very fully on this subject, and to that article refer our readers. We would only again repeat what we then emphasized: "Cultivate frequently, cultivate flat." If a crop does not appear to be growing with that vigor which is desirable, it may be helped during cultivation by intercultural fertilization—that is, by applying a quick acting fertilizer during cultivation. A good mixture for this purpose may be made by using 100 pounds of nitrate of soda, 200 pounds of acid phosphate, and 25 pounds of muriate of potash per acre. Apply this in the middles between the rows and not close to the rows. The roots will soon find this, and it will help largely to make ears rather than stalk. At the last cultivation sow or plant some leguminous crop in the corn and cover with the cultivator. Cow peas, soy beans or crimson and sapling clover make good crops for this purpose. They smother down weeds, help to conserve moisture by shading the land, whilst not injuring the growth of the corn. Crimson clover and sapling clover seeded together will often make a good stand and make a good winter cover for the land and provide winter and spring grazing. The crimson clover will, if not grazed too long, make a good hay crop in May, and the sapling clover will then come along and make a hay crop in July. All these leguminous crops make excellent fall grazing for hogs and cattle and good preparation for next year's crops. Do not neglect the advice we gave in our last issue as to cutting off the tassels of all barren stalks before the pollen forms, and thus prevent the perpetuation of the growth of such stalks. If every stalk in a corn field had only one good ear on it the average yield of the crop in

the South would be increased by many bushels per acre.

Tobacco plants should be set out where not already done as fast as the land can be got ready. Plants we hear are plentiful and thrifty. Do not let them get drawn in the seed beds and become long and lanky. Such plants rarely amount to anything. A short, stiff-set stocky plant is the one needed. If necessary, thin out the plants in the bed to prevent their becoming drawn. We have reports of much trouble in some sections from cut worms. One planter tells us that he has set out 10,000 hills twice, and that the cut worms have taken nearly the whole of the two plantings. Much of this trouble might be avoided every year by breaking the tobacco land in the winter when the cut worms will be largely thrown out on the surface and be killed by the frost. In order to get rid of any that may be left when the land is again broken and prepared for setting, and there is nothing green upon it on which the cut worm can feed, bunches of clover or young cabbage leaves should be dipped in a strong mixture of Paris green and water, so that they may be well covered with Paris green, and these be dropped at short intervals over the field. The worms will feed on these and be killed. Bran and ship stuff mixed with some molasses and water and plenty of Paris green and squeezed into balls and these dropped over the field make also a good poison for the worms. It is, however, of much less use resorting to these poisoning methods after the plants are set out, as the worms will be sure to feed on the first tender green thing they come across, and this will often be the tobacco plants, and thus many will escape being poisoned. There is no known method of getting rid of the worms after green growing crops are on the land. Some will be killed by poison distributed over the field in the manner described, but enough will usually be left to make a defective stand of the crop. The work of cultivating the tobacco after the plants have commenced to grow should have constant attention. Whilst less damage will be done in cultivating deep in a tobacco crop than in a corn crop from the fact that the roots of the tobacco plants do not run all over the field, but keep much closer to the plant itself, yet deep cultivation ought not to be required to insure the growth of the plant. The whole field ought to have been so deeply and finely broken before the plants are set out as to require nothing more than surface cultivation to conserve the moisture and kill germinating weeds. Wherever deep cultivation is done it is a sure means of wasting moisture from the soil, and in the event of a dry

time will cause injury to the crop. Do not let the plants grow too tall before "topping." It is far better to have a smaller number of leaves all of uniform size and equally ripened than a large number of varying sizes and unevenly ripened, as is bound to be the case. A uniform cure can never be secured with unevenly ripened leaves, and the value of the product largely depends on the uniformity of the cure. See to it that the first brood of worms is closely picked off or otherwise destroyed, and thus limit the number of later worms. The practice of spraying the crop with Paris green to destroy the worms is now well established in many sections, and it has been demonstrated that this can be done without injury to the sale of the tobacco, at any rate during the early part of the growing season. We question whether it is desirable to spray after the leaves begin to ripen, as some trace of the poison might be found on the leaves, and this would prejudice the sale. The proper strength of mixture to use for killing the worms is one pound of Paris green to 160 gallons of water.

Corn and sorghum for the silo should be planted in this month and July. Whilst either crop will make excellent silage, a mixture of the two will make a better feed than either alone. The crops should, however, be grown separately and be mixed as they are run into the silo. Cow peas grown along with the corn will make a better balanced silage than corn alone, and add to the yield per acre and to the quantity which can be stored in the silo. The Whippoorwill pea or the Clay pea are the best to grow for this purpose, as they keep closer to the corn than the Black pea, which throws its vines across from row to row of the corn, and thus tangles up the crop and makes it difficult to cut and handle. The peas should be planted alongside the corn rows at the second or third working of the crop, and will then be ready for cutting when the corn is ready. It has been demonstrated in experiments at the Tennessee Station that sorghum silage can be made at less cost than corn silage, and as the feeding value of the two are about the same, it is advisable to at least make part of the silage crop from sorghum. Corn does not yield so well for fodder or silage as sorghum. In one experiment made at Tennessee the cost of harvesting a silage crop of sorghum was \$12.83, and the cost of shocking a similar crop of sorghum grown for fodder was \$9.12. The total cost of putting up 19.8 tons of sorghum silage per acre was \$22.65, or \$1.15 per ton. The total cost of shocking 7.10 tons of sorghum fodder per acre was \$18.94, or \$2.64 per ton. The sor-

ghum silage was ready for immediate use as food, while the shocked sorghum had still to be cut up in order to get it into the best form for feeding. In the case of the corn crop, it cost \$6.17 to harvest and put it in the silo, the total cost per acre being \$17.11. It cost \$1.73 to harvest the corn stover, with a total cost of \$4.38 per acre. The corn when cut in the silo yielded 8.3 tons of silage, when the ears were stripped off and the stalks cured as stover 1.5 tons. The cost of a ton of corn silage was \$2.06, and a ton of corn stover \$2.92. As a beef or milk making ration, silage, whether made from corn or sorghum, is a long way ahead of the same crops made and fed as fodder, besides being so much more convenient to feed during the winter. Every farmer who keeps stock, and no one is a true farmer who does not keep stock, should have a silo. It is the cheapest barn he can build and preserves the crops in the best condition for profitable feeding. In planting corn or sorghum for silage give the crops sufficient space between the rows to admit of easy cultivation, and thus have them well exposed to the sun and air, so that they may become well matured and carry a fair proportion of ears. The space between the plants in the rows may be brought down on good land to six or eight inches, and thus a heavy crop can be grown which will make a sweet silage heartily relished by stock of all kinds. Soy beans may be grown as a silage crop, and make a valuable addition to the feeding value of corn or sorghum silage, adding the much needed protein to the carbo-hydrates of the corn and sorghum. When used for this purpose they should be grown as a separate crop, or they will not make such a crop as they are capable of doing. They should then be cut and run into the silo along with the corn or sorghum.

In our last issue we wrote fully on the subject of growing forage crops for stock feeding, and gave advice as to the different crops which can be grown, and to that issue we refer our readers. The sowing of these crops should be given immediate attention, as unless put in during this month or the early part of July they will not have time to mature sufficiently to make the most valuable feed. As showing what the feeding capacity of some of these crops is, we quote the following from an experiment made at the Pennsylvania Station: At the rate at which the cows ate the forage and the yield per acre there secured an acre of soy beans would feed 10 cows 17 days, 1 acre of sorghum would feed 10 cows 35 days, 1 acre of sorghum and cow peas would feed 10 cows 34

days, 1 acre of cow peas would feed 10 cows 21 days, 1 acre of field corn would feed 10 cows 16 days.

The cotton crop should be brought to a stand as soon as the plants are sufficiently grown to allow of this being done. Every day's delay after the plants are large enough to chop out means injury done to the plants ultimately left to make the crop. They become drawn and spindling, and recover slowly from the disturbance of their roots involved in taking out the discarded plants. When once a stand has been secured push the growth by frequent shallow cultivation, and keep the soil level. Sow crimson clover or a mixture of crimson and sapling clover at the last working to make a winter cover for the land and to provide humus for the feeding of the next crop.

The harvesting of the hay and clover crops will call for attention during this month. Do not let these crops stand uncut until the seed is formed and ripening. They should be cut when just coming into bloom. At this time the nutritive matter in the plant is in its richest form, and is contained in the leaves and stalks. After the plant has bloomed most of this is absorbed in the formation of the seed, and the stalks and leaves become merely so much woody fibre of very little nutritive value. Hay being grown not for the seed, but for the nutrition which is derived from the leaves and stalks, these should be cut and cured when the nutritive elements are in them. In curing these crops be careful to let them be exposed to the hot sun only sufficiently long to thoroughly wilt then, and then cure out in windrows and cocks, so that all the leafage may be kept on the stalks and cure up bright and green. Only by being cured practically in the shade can this be accomplished. Do not overcure before storing in the barn or stack. Never cut hay or clover when wet with rain or dew, and be careful always to dry out any rain or dew which may fall on the crop when curing before hauling. Hay may safely be stored in the barn or stack with a considerable quantity of natural moisture in it and will cure out perfectly and make sweet smelling, appetizing hay much superior in feeding value to the over-dried stuff called hay which is the common product to be found on most Southern farms. If, however, the hay when stored is damp with rain or dew it will mould and may fire from spontaneous combustion. If the hay is to be stacked in the field make one large stack rather than a number of small ones. The quality of the product saved will be much higher in nutritive value,

and there will be much less waste from weathering of the outside.

The harvesting of the wheat and winter oat crops will require attention, as the crops ripen in this and the succeeding month. See to it at once that binders, reapers and mowers are all in good working order, and if any repairs are needed have them ordered and attended to so that no delay will occur when the crop is ready for cutting. Have also on hand a supply of such parts of the machines as are most apt to break, so that cutting will not have to be suspended more than an hour or two if an accident happens. Many a good crop has been lost by having had to wait until repairs could be sent from the factory. Do not let the wheat or oats become overripe before commencing to cut. The finest samples of grain always come from crops cut a little under-ripe, and much grain is also saved by following this rule, as it shatters so much less during the handling. Have, if possible, a force of hands engaged sufficient to keep close up to the binder or reaper with the shocking, so that when the field is left at night all will be shocked and safe from danger. Insist upon good, well filled, well made shocks, well capped. Such a shock will turn rain for days, whilst a poor hollow centered shock, without cap or badly capped will be wet through with an hour's rain.

SOY BEANS.

A subscriber of ours farming a large place in Eastern Virginia is not inclined to agree with Mr. Julian Ruffin as to soy beans not being an improver of the land. Last year he grew a crop of soy beans on part of a field which he later seeded with wheat. The beans were plowed under sufficiently early to allow the soil to become well consolidated, and the land was then sowed in wheat along with the rest of the field. He says that any one looking at the field even from a distance can readily see to a yard where the beans grew. The wheat is on this part of the field much thicker, taller and a better color than on the rest of the field, and closer examination shows that the ears are there much larger than elsewhere. He says that soy beans on his farm are better as an improver than cow peas, but to secure the best results they should be plowed down earlier than cow peas, as they take longer to decompose and become available for the ensuing crop.

Mention the **PLANTER** to your friends.

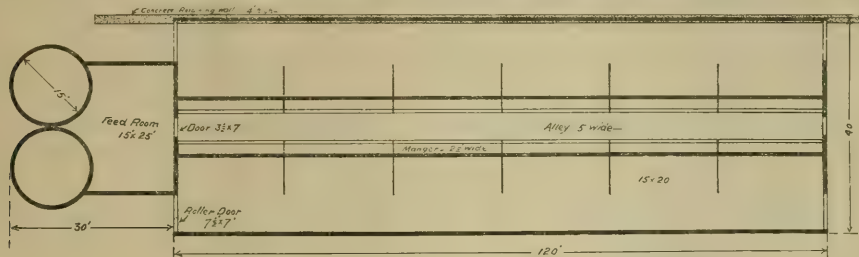
A CATTLE FEEDING BARN.

Editor Southern Planter:

The illustrations accompanying this article give a very good idea of the general appearance of a new cattle feeding barn which has just been completed on the grounds of the Virginia Experiment Station. The front elevation faces the south and the stable part of the barn is therefore open on that side to admit of free circulation of air and light, it being now fairly well established that cattle do better when protected from inclement weather, but practically allowed their freedom.

The barn is 120 feet long, exclusive of the feed room and silos. The feed room is 15x25 feet, and the silos 15 feet in diameter, and designed to hold about 100 tons of food. One silo would have been quite as satisfactory as the two, but as the end elevation shows, they are of different types, one being of the well-known stave construction and the other what is known as the modified Wisconsin type—that is,

factorily. Any form of shed that will protect the cattle and keep the feed dry is all that is necessary, but such a structure would not provide storage space for the rough fodder, hay and straw which would be needed through a feeding period of from three to five months, and it is probably greater economy in the long run to build a barn at a cost of a few hundred dollars more that will provide storage and bring all the foods within easy reach so as to facilitate feeding rather than to store the feed in ricks or shocks in the field and have to haul it in as needed during the winter season when the ground is wet. Besides, the food suffers a great loss from exposure, and then by concentrating the foods to be used in a small space, the labor of feeding is greatly reduced, one man being able to care for the cattle in a barn of this kind, whereas the services of two or three would be required were a different system of storing and handling the food followed. However, an attempt has been made to design a barn simple in construction



Ground plan of cattle feeding barn, Virginia Experiment Station, Blacksburg.

constructed of 2x4's and lined with split fencing with acid proof paper between. These silos will come under the extended roof of the barn, and the purpose is to determine not only the relative cost of constructing the two types, but their merits for preserving silage, and their lasting qualities as well. The foundation of the barn is made of concrete, as shown in the front elevation of the stable floor plan, the posts supporting it resting on piers on one side and on the retaining wall on the other. The size of the structural timbers is given in the cross section, so that any one desiring to construct a barn of similar design would be able to obtain all the information necessary from these drawings.

The detailed methods of construction followed have been given in this article because of the large number of inquiries asking for information with reference to the construction of barns suitable for cattle feeding. Of course, on the average farm a much cheaper structure than this barn could be used satis-

and as cheap as possible for the purpose intended, for it is the belief of the Station authorities that it is better and more satisfactory in every way to construct a barn of this type that may be a model in many respects, and so of direct benefit to the stockmen rather than build a much more expensive structure, which could not be successfully utilized by those desiring to build one.

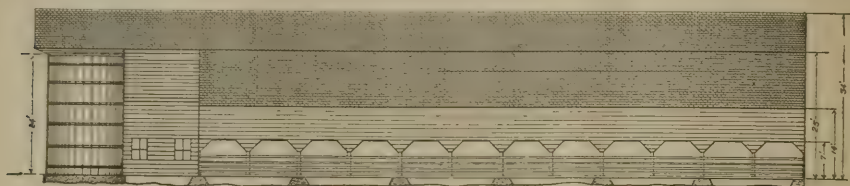
As the barn is open on one side, seven feet is plenty high enough for the stable space. In a closed structure it would, of course, be better to make this nine feet, which would add considerably to the cost. The posts used in the barn are 14 feet high, and from the floor to the first break of the roof the distance is 25 feet, which provides a very large storage space. The roof of the barn is modern in design, the structural timbers used being 2x8's and 2x6's in place of the heavy rafters, plates and scantling formerly used. This method of construction gives the same strength with the use of much lighter materials than was for-

merly obtained by the old methods of construction, and at the same time provides for a great saving in the cost of the timbers used because of their lighter nature. This is a very important matter to one contemplating building a barn at the present time owing to the high price prevailing for lumber.

The passageway through the barn is 10 feet wide,

free circulation of air, which the design provides, the odor from the animals does not amount to anything, and the food is sufficiently protected from the same. Dirt is also kept from falling down on the animals through the tight floor provided, so that the arrangement is satisfactory in these respects.

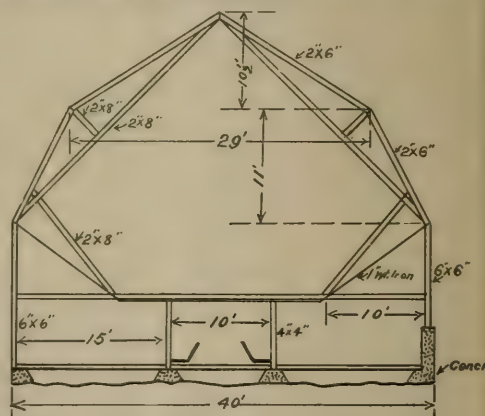
The barn provides room for the handling of 120



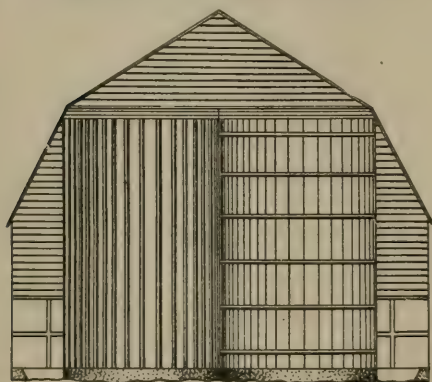
Front elevation opening towards the South.

with mangers 2 1-2 feet at the bottom and flaring out at the top. This leaves an alley 5 feet wide, so that the silage and other rough feed can be conveyed to the desired place by a truck, and chutes are provided in the floor of the loft so that hay, straw and shredded stover may be put down at convenient places. It is proper to say that the barn is provided with a hay fork, so that all coarse foods can be placed in the mow practically where they are to be stored, and thus reduce the labor required in handling very materially. The feed room is designed for the mixing of foods when this becomes desirable, and also for the handling of the concentrates which can be

head of cattle, and is so arranged that a cart or wagon can be used for cleaning out the stables when this becomes necessary. Of course, a manure carrier could be used, if desirable, but it is still more of an advan-



Cross section showing plank frame construction.



End elevation showing Silos.

stored on the loft floor and in large bins and carried down through chutes so as to facilitate mixing. Some people object to the storing of food above cattle, but with a perfectly tight floor of tongued and grooved material, such as has been used in this barn, and the

tage to be able to convey the manure directly from the stable to the fields, as this is no doubt the most expeditious and best manner of handling and applying it at the same time. Six divisions 15x20 feet are provided on each side of the alley and designed to accommodate ten head of cattle. It is not proposed to tie the animals except in case of some very special experiments. The animals in the several divisions can be separated by means of gates on rollers, which facilitates passage from one division to another. The barn is covered with shingles and the sheathing is of ordinary weather-boarding. The foundation consists of 28 cubic yards of concrete, made in the fol-

lowing proportions: Cement 1 part, sand 3 parts, and rock 6 parts. The bill of lumber required for the structure is as follows:

27	pieces	6x6x20'	6"
4	pieces	6x6x15	
15	pieces	4x6x20'	6"
10	pieces	6x6x14	
150	pieces	2x6x14	
122	pieces	2x10x15	
61	pieces	2x10x10	
28	pieces	2x8x27	
122	pieces	2x6x16	
122	pieces	2x6x10	
61	pieces	2x6x10	

Six thousand feet in boards, making a total of 19,775 feet. This is exclusive of silos, which have not been erected, but which it is believed can be built for something like \$150 to \$200 apiece. The labor required to erect the barn was \$534.26. The total cost of the barn, exclusive of silos, was \$1,501.29, and including the silos and feed room, it will cost approximately \$2,000.

Yards will be provided on the south side of the barn for turning the cattle out in the day-time for exercise. These yards can also be utilized to compare the economy of feeding when cattle are exposed and under shelter. A blue grass field adjoining the barn is available, and can be used for feeding the cattle through the winter on corn fodder and other cheap forms of roughness. It will thus be possible with the barn and present equipment to test the feeding of cattle in sod fields, in open yards and under shelter. This barn provides the Station with excellent facilities for a series of important investigations in the feeding, handling and general management of beef cattle designed for immediate slaughter, or to be finished on grass for export purposes. While this barn is designed especially for experimental feeding, it is at the same time constructed on lines that could be utilized to advantage on any large stock farm, and it is hoped that it may suggest a solution of some of the difficult problems with which those contemplating the erection of stock barns find themselves confronted.

ANDREW M. SOULE. *Dean and Director.*
Virginia Experiment Station.

A GRASS FARMER.

Editor Southern Planter:

It was my pleasure recently to talk with a grass farmer "right here," in Montgomery county, of Southwest Virginia. As I looked over the beautiful

acres of fine grass and heard Mr. Sam. Stephens explain his methods of grass culture, I became very much interested in his work. Mr. Stephens is a young man, and was formerly in the mercantile business, but has made a decided success in grass culture. Is there another grass culture man in Virginia? Mr. Stephens is such a modest man that I doubt if there are a dozen men, outside of his own neighborhood, who know much about his work with grass, and in improving a much worn farm. The facts may be new to many readers of the *PLANTER* even in this county.

The land about which I write has been known by me during the past thirty years, and when Mr. Stephens took charge of it, some ten years ago, much of it was badly washed and worn. Now, the capacity of the soil for crop production is fully doubled, and Mr. Stephens cleared enough money last year to equal the salary of a good political official. These facts prove that his work is a success beyond question.

Now, others like myself will want to know something about his method. How does he make his work a success in improving his soil and making a good financial profit at the same time? He has branched off in his practice from the time-honored methods of farming. We need many more of just such farmers in Virginia, and they can do just what Mr. Stephens is now doing.

Mr. Stephens grows hay for sale. Living near the railroad town of Cambria, and also not far from the town of Christiansburg, the local demand takes all his hay. He hauls hay to town and then hauls manure back on the farm. This year 140 loads were spread over the land, but even this was not all the fertilizer user. I asked him why he did not pasture some stock, and he replied that it paid much better to mow the grass. I remarked that fields which were much worn and bare a few years ago now had a beautiful sod on them and were greatly improved. I asked how all this was brought about. In the first place, he said, I sow enough grass seed. My rule is to sow fifteen pounds Timothy, three pounds Red Top, and half a gallon of Red clover seed per acre. The land is thoroughly prepared in the fall and the timothy and Red Top seed are drilled in with wheat. Clover seed is sown in the spring. This clover keeps my land loose and adds nitrogen to the soil. Some clover in timothy does not hurt the hay for local market. In the spring, if I think my stand of grass is not going to be good, I harrow the ground thoroughly and sow more seed.

Mr. Stephens also drills in with his wheat a liberal supply of bone meal. He uses very little potash and

nitrogen with his wheat. His wheat yielded 26 1-2 bushels per acre last year, and the stand of grass is excellent. This spring he has been sowing nitrate of soda on some of his meadows, and is much pleased with the results. Last year he cut 3 1-2 tons of hay per acre. This hay rarely sells as low as \$12 per ton. Even at this rate, the hay was worth \$42 per acre. He is trying to excel this yield. He is trying the Clarke method on a few acres this year, and is also starting alfalfa.

He has a beautiful young orchard of 1,300 trees on the farm just coming into bearing. These trees are cared for with great pains. The ground is fertilized with bone meal and wood ashes. One or two clover crops have been grown on the land and turned under. The trees are in excellent shape, and no doubt will add handsomely to the revenue of the farm when the crop of fruit comes in.

There are many farms in the State near railroad towns where grass farming might pay just as well. More grass and leguminous crops will be the salvation of the farming lands of the State. Without these we will become poorer, agriculturally, each year.

There is good work both for the State Experiment Station and the State Department of Agriculture to be done along these lines. Let us have more grass and less barren land exposed to leaching rains.

R. H. PRICE.

Montgomery Co., Va.

Whilst in some sections of the South grass and grain may succeed, yet our own experience and that of other successful grass growers is that when grass is wanted in a hot climate it should be seeded alone. The hot mid-summer sun has killed thousands of acres of young grass and clover after the wheat has been cut off.—Ed.

NOTES ON CLOVER.

Editor Southern Planter:

What becomes of all the grass seed we sow in the spring? I have been studying this subject very closely for several years, and I want to give some of the results of my experience. Scattering clover seed over the ground that costs \$8 per bushel has tempted me to look after this seed closely.

Older farmers tell me that young clover is killed by late freezes in the spring, and that is the main reason we do not get a "good stand" of clover from early spring sowing. The fact is I have never known young clover to be killed by a late freeze in the spring. "Time and again" I have had clover seed to fall on the ground in late summer and fall and

then come up to a beautiful stand in the spring. It is doing it with me this year. My young clover was up with three or four leaves on when the severe freeze came on 17th of April. I have not seen a single plant killed by the freeze. Look at it, farmers, for yourself. Look very carefully.

Much of the clover after it falls on dry, hard ground in the spring sprouts and perishes during dry, windy weather. However, I notice that on the hardest ground I usually get the "best stand" of clover. On the loosest and richest ground the stand most often fails. By close observation I notice that driving rains wash out the young, tender plantlets in this loose soil, and when the dry winds come they perish. On hard ground the plants do not wash out near so much, and hence stand dry weather better.

Drouth kills our young grass and clover and not the cold weather. Especially is this true with late spring sowing. I believe in harrowing the seed into the ground, if sown in the spring, and packing the ground by rolling, if possible. Fall sowing of most grasses, and possibly clover also, is very likely the best. The advice the PLANTER has been giving on this subject is good. Last fall I sowed timothy seed as late as November, and it has come up this spring to a beautiful stand.

Another point about clover I notice this spring, is that where I let a crop seed and fall down, the old clover is entirely dead, but the ground is reseeded. In another field where I let the heads of the clover begin to turn brown before grazing it, many of the best clover plants are still there growing, while also much seed was formed and young clover plants are coming up in this field also.

I believe in pasturing clover before the seed forms, so as to keep some of the old clover, and also get some of the new.

R. H. PRICE.

Montgomery Co., Va.

COW PEAS.

We have had a number of enquiries recently as to the yield of cow peas, which can be made per acre. At the Alabama Experiment Station, where probably the most complete and fullest experiments with this crop have been made of any place in the country, the following yields have been made:

Clay peas, 8,750 pounds of hay per acre, with practically no peas.

New Era, 750 pounds of hay per acre and 1,337 pounds of peas (22 bushels).

Extra Early Black Eye, 750 pounds of hay per acre and 1,025 pounds (17 bushels) of peas.

We have had reports of from 20 to 25 bushels of peas to the acre made in this State.

COW PEA HAY MAKING AND SAVING.

The season for the saving of this crop being now near at hand, it may be well to again bring the subject up for discussion. A large grower of the crop in Tidewater Virginia recently gave us his method of saving it, and he says that he has been uniformly successful.

He cuts the crop with the mower as soon as the first peas are beginning to ripen, endeavoring to select a time when the weather seems settled. He leaves the crop broadcast as cut for a day or so until thoroughly wilted, and then rakes into windrows. In making these windrows he is careful not to dump his rake every time in exactly the same line as the previous rake full was dumped, but carries the second and succeeding rakesful just far enough past the one previously dumped to make a break in the row. In this way the windrows run diagonally across the field, each rakeful being dumped independently and alone. When the whole field has been raked in this way he then sets men to work with forks and puts each rakeful thus dumped into a separate cock, leaving the cock light and permeable by the wind and sun, and is careful not to shake off the leaves any more than possible. These cocks he allows to stand for a day or two, according to the state of the weather. When the hay is nearly cured he sets the men to work with forks to turn over each cock bottom upwards on to the dry ground adjoining where it was made and just lightens the cock up sufficiently to allow the wind to draw through it. After the cocks have remained in this condition for a few hours, if the weather is good hay-curing weather, the hay is hauled to the barn and packed away tightly and not again disturbed. If rain or heavy dew falls on the hay care should be taken to have this all dried out before it is hauled. Whilst hay of any kind will cure and keep well even though it has a considerable degree of natural moisture in it when hauled and stored in the barn, the only evil result being a browner color than if more thoroughly dried before storing, which deeper color in no way detracts from the feeding value of the hay, yet hay stored with any rain or dew on it will invariably mould, and may heat sufficiently to fire from spontaneous combustion. We have known this to happen, but we never knew hay saved clear of rain or dew to fire, and rarely to mould, except when very soft when hauled, and then only on or near the top of the stack or mow.

ALFALFA IN NORTH CAROLINA.

Mr. S. L. Trogden, of Guilford Co., N. C., one of the most progressive and enterprising farmers of the State, has made a success in growing alfalfa, which should lead to wonderful progress and increased development in the crop and stock producing capacity of that State. Mr. Trogden's efforts to secure a stand of alfalfa were unavailing until he inoculated his land with the necessary bacteria. The seed would germinate and plants grow for a time, but they then withered and died. He sent to one of the finest alfalfa farms in New York State and got 400 pounds of infected soil from an alfalfa field which had stood for twenty years. This soil he carefully sowed over four acres of his land, and then seeded it again with alfalfa. He has now one of the finest stands of alfalfa possible to be desired. The whole four acres is thickly set with the plants which are of a dark, rich green color. The cost of the imported soil was \$5, including freight charges. He estimates that the crop this year will be worth \$100 per acre. The same results can be had by inoculating the seed with the proper bacteria which the Virginia Experiment Station is supplying at a cost of 25c. per acre. Farmers, however, must not run away with the idea that only the bacteria is needed to secure such results, as Mr. Trogden and other successful growers of alfalfa are securing. The land itself must be adapted to the crop, preferably a good loam soil, well drained and with the soil water level not nearer to the surface than 12 or 15 inches, and this must be well supplied with phosphoric acid and potash, and be rich in humus, and also have had a dressing of 15 or 20 bushels of lime to the acre to ensure freedom from acidity, and must also be clean of weeds, which are fatal to the growth of alfalfa. Where these conditions are not present they should be secured before the inoculated seed is sown, or success will not be achieved. The summer months are the best time to kill out the weeds and prepare the land, and when this is done then an application of lime should be made and 400 or 500 pounds of bone meal per acre should be worked into the soil, and the inoculated seed be sown in August or September.

COST OF HARVESTING HAY.

Editor Southern Planter:

The claim is made for the South that we have cheaper labor here than North or West. In Nebraska and Kansas the cost of harvesting a ton of hay will probably average less than \$1.75 per ton, whereas the yield is a ton or more per acre. Here

in Virginia as much as half of the crop is being charged for cutting, raking, etc., and getting the hay in stack. Hay being worth \$14 per ton in stack, this charge would amount to \$7 per ton. Having seen hundreds of tons of hay sold out West in stacks at \$3 per ton twenty years ago when labor was higher than to-day, it seems to me that the cost of haying should certainly not be more than \$3 per ton here, where labor is cheap.

What is the actual cost of mowing an acre of grass? How much for raking? How much for tedding twice? How much for dragging the hay with a sweep from the windrows to the rick? How much for one horse and a boy to operate a stacker and a man to spread the hay on the stack?

As anybody can make a hay sweep and a stacker, the charge for the use of these simple implements should be very small. Something should be allowed for wear and tear on mower and rake. While we are at it, how much does it cost to load a ton of hay on a wagon with pitch forks? How much when the work is done with a loading machine? How much does it cost to unload a ton into the barn with pitch forks, and how much when the work is done with a horse fork?

While I have but 25 acres of grass, yet, to pay for the harvesting at the rate of \$7 per ton is quite an item. A farmer doing such work for another is, of course, entitled to a fair profit over and above the actual cost of doing the work. Merchants are usually satisfied with a net profit of from 10 to 25 per cent. above cost. In a case like this perhaps 50 per cent. more than the actual cost should be allowed for profit.

If readers of the SOUTHERN PLANTER will give their actual experience as to the cost of harvesting their hay crops, an exchange of ideas is likely to result in giving all an opportunity for learning the cheapest and best methods. Supposing we start with real grass crops or grass and clover mixtures, what does the harvesting of your hay crop actually cost you per ton, figuring your time as well as the time of teams and help? N.

Hanover Co., Va.

THAT PATCH OF CLOVER.

Editor Southern Planter:

That patch of German clover of yours was mighty handy and you were rather sorry when it got too old to feed to your horses, and how the milk increased when you gave the cow an armful of the crimson, juicy forage.

How would you like a patch of clover that can be

cut even a little earlier than the crimson and not only once, but all summer long, four or five times—a patch that does not have to be reseeded every year? That is the advantage of alfalfa. Besides, what you do not feed green will make excellent hay, as rich in feeding value as wheat bran. It is good for horses, cows, sheep, pigs, and even chickens eat it all winter long.

To make good forage or hay, alfalfa must be sown thickly, from 25 to 30 pounds of seed to the acre, else the stems will become woody and indigestible. Be sure to put in a few acres in September. Get your land ready now. Every acre of alfalfa will add at least \$200 to the value of your farm if *properly sown and cared for*. N.

DOUBLING CROPS IN ENGLAND.

Consul Frank W. Mahin, at Nottingham, England, under date of January 31, 1905, makes the following report on experiments recently made in England, showing what liberal fertilizing will do with naturally poor land in the way of increasing yields:

"Experiments carried out during the past season in this country demonstrate that liberal fertilizing may do with naturally poor clay land. In one case a mangold wurtzel beet field was divided into five plats, one of which was left unmanured for comparison, while the others received four hundredweight (448 pounds) per acre of superphosphate (acid phosphate), with and without nitrogenous manure. The unmanured plat gave 12 3-4 tons of roots per acre. Superphosphate alone raised this yield to 20 1-4 tons; superphosphate and two hundredweight (224 pounds) of nitrate of soda per acre raised the yield to 27 1-4 tons; superphosphate and four hundredweight (448 pounds) of nitrate raised it to 34 tons, and superphosphate and six hundredweight (672 pounds) of nitrate raised it to 39 tons. The respective increases due to manuring on the four fertilized plats were, therefore, in round figures, 7, 14, 21, and 26 tons per acre, and, if the cost of the fertilizers be taken into account, the average cost of the increase in roots was less than 3s. (75 cents) per ton—considered a very cheap price to pay for mangolds in a season not especially favorable to their growth. The board of agriculture estimates the mangold crop of the country for 1904 at 18 3-4 tons per acre. This yield of the best plat referred to, 39 tons per acre, was therefore double the average.

"An experimental oat crop followed a crop of roots. Without manure the yield was 27 bushels of

oats and 17 hundredweight (1,904 pounds) of straw per acre. With 3 hundredweight (336 pounds) of superphosphate per acre the yield was 34 bushels of oats and 21 hundredweight (2,350 pounds) of straw, and with superphosphate and 1 hundredweight (112 pounds) of nitrate of soda per acre 41 bushels of oats and 24 hundredweight (2,688 pounds) of straw; while superphosphate with 2 hundredweight (224 pounds) of nitrate, applied in two dressings, gave 47 bushels of oats and 28 hundredweight (3,136 pounds) of straw. In each case the increase in grain and straw is taken as worth, roughly, twice the cost of the fertilizers employed in producing it.

"The board of agriculture estimates of a normal oat crop indicate that the yield of 47 bushels per acre is at least 10 bushels beyond the average from ordinary soil."

AS TO RENTING.

Editor Southern Planter:

In this (the Eastern) part of Virginia it is customary to pay one-fourth of the crop as rental. No allowance is made for the use of the residence, etc. In some instances the residence alone may have cost more than a good-sized farm may be bought for today. No interest is received on the money invested in good buildings, nor can a sinking fund be provided to meet the depreciation by natural wear.

As to the rent share. Will one-fourth of the crop pay for the fertility taken out of the soil? Supposing the corn crop amounts to 20 bushels per acre, giving the landlord 5 bushels at 50c. per bushel, \$2.50 per acre. Is this amount sufficient to pay for the fertilizer and the cost of hauling and sowing it to replace the amount of fertility taken by that crop? If it does, will anything be left as interest on the money invested in the land, and how much?

The renter practically buys the fertility in the soil and uses it. If the land is poor a few crops are sufficient to exhaust the soil. Then the land is allowed to "rest"—that is, to grow up in weeds. After a few years some humus from decaying weeds has accumulated and the land is again cropped, unless it has grown up in sassafras or scrub pine.

Some renters use fertilizer for wheat, but, of course, the crop consumes the fertilizer. Some renters sow clover, but clover, while it does not consume nitrogen, feeds on phosphorus, potassium and lime, and thus also exhausts the soil. By deeper and better cultivation some tenants produce larger crops and consequently pay larger rent than others, yet the

larger the crop the greater the loss of fertility to the soil.

In some cases the landlord furnishes half of the fertilizer and the tenant furnishes the other half for certain crops. Such arrangements usually, however, cover only small fields, small in proportion to the total acreage of the farm.

If the lot of the tenant farmer in Eastern Virginia is a hard one, the lot of the landlord is certainly worse, for he actually loses money on his investment by the depreciation of his property even if the rent should amount to a fair interest on the purchase price of the land. Occasionally the land may become so poor that tenants will "turn it out" entirely. It grows up in pine, and after a generation the landlord finds himself possessed of timber land. If located conveniently to railroad the timber may be worth more than the cost of cutting, sawing and hauling. As a rule, however, such growth is not very valuable.

What is the remedy?

Hanover Co., Va.

N.

LIME.

Editor Southern Planter:

The article entitled "Some Facts About Lime," on page 275 of the April number, needs a little correction that your readers, the farmers, may not be misled thereby. Caustic or biting lime is not the only active or valuable form of lime. Air-slaked lime, fine ground limestone, fine ground oyster shells, gas-house lime and ground marl are all effective in correcting soil acidity, improving the physical and chemical conditions of the soil, and in promoting the activity of beneficial bacteria. The effectiveness of the lime (CaO) in these forms is nearly or quite as great, pound for pound, as is the caustic lime. This is definitely shown by the experiments of the Maryland and Illinois Stations. The form in which lime shall be applied, whether caustic, hydrate or carbonate, is chiefly a question of economy. If a bushel of caustic lime weighs 80 pounds and is worth 10 cents, it would require 106 pounds of hydrated lime (water slaked lime) or 143 pounds of carbonated lime or ground limestone to contain the same amount of actual lime (CaO) and the 106 pounds of water slaked lime and 143 pounds of ground limestone must each be bought for less than ten cents to meet extra freight and handling charges.

It is very important that the farmers should know that these other forms of lime are valuable for in the tidewater regions where railroad facilities are

poor, ground oyster shells, gas-house lime and marl are the only forms of lime available to the farmer. The preparation and use of some of these marls containing more than 20 per cent. of lime would doubtless be profitable to the farmers of this region, provided the price is not more than \$1 per ton and the wagon haul not more than two or three miles.

The general practice in putting out lime is to place it in one bushel piles, as the small size of the piles enables one to spread the lime more uniformly without moving from the pile. Covering the pile with earth during slaking is usually an unnecessary labor and expense. With regard to the limiting price of the profitable use of lime, I may say that the farmers of Maryland pay from 12 to 20 cents per bushel, including freight, and use it with profit. A bushel of lime in slaking increases about one-third in weight and from two to three times in volume.

F. P. VEITCH.

College Park, Md.

SOIL ACIDITY.

In our last issue, replying to an enquirer, we discussed the possibility of the continued use of acid phosphate rendering soils too acid for the production of crops, and expressed the opinion that this was not to be feared, giving our reasons for this view. Dr. Thorne, the Director of the Ohio Experiment Station, is of opinion, as the result of experiments made at the Ohio Station, that there is a possibility of this acidity happening on certain soils, at least so far as to render the soils in question too acid for the production of clover, and therefore that lime should in such cases be used with or after the acid phosphate to correct this. We reproduce the following letter from Dr. Thorne to the *Practical Farmer*, which has had the subject under discussion:

"Referring to the editorial in *The Practical Farmer* of April 8th, permit me to say that what I have claimed is, not that acid phosphate and muriate of potash are the cause of soil acidity, but that they increase the tendency to such acidity. We have many acid soils in Ohio on which neither acid phosphate nor muriate of potash have ever been used, but the experiment plats of the Ohio Station, on which various combinations of fertilizing materials have been employed for twelve years past, show that acid phosphate at least, when used in the absence of some carrier of lime or nitrogen, has exerted a prejudicial effect upon the growth of clover. It is, of course, true that acid phosphate, when properly made, and potassium chloride are neutral salts; but in the pro-

cess of tissue building these salts are disassociated, the plant utilizing such elements as it requires and rejecting the remainder. To illustrate: Acid phosphate is composed of approximately equal weights of sulphuric acid, and that phosphate of lime known as tri-calcic, or bone phosphate. The analyses of our crops indicate that, under ordinary conditions, phosphorus and lime are found in the plant in about the proportions required to produce tri-calcic phosphate, while the sulphuric acid found in the same crop is far below the quantity required to balance the phosphorus in acid phosphate. Hence it seems probable that the plant utilizes the phosphate and rejects the major part of the sulphuric acid, which, of course, immediately recombines with some other base. Lime would be the base with which we should expect this recombination to take place, producing sulphate of lime, or gypsum, a product much less soluble in water than lime in its ordinary soil condition of carbonate.

"If the soil store of lime were scanty the locking up of lime in this manner might mean a serious setback to clover, a plant which requires several times as much lime as do the cereal crops usually grown. This is no contradiction of the fact that applications of gypsum have sometimes been found very beneficial to clover, for such applications have been a distinct addition to the total stores of lime in the soil, whereas in the case above supposed the gypsum would be formed at the expense of these stores. There is another possible effect of the liberation of sulphuric acid in certain soils. The soil of this Station is not only scantily supplied with lime, but it is rich in iron. Under ordinary conditions an abundant supply of iron in the soil is a distinct advantage, the iron furnishing an oxidizing agent by which the chemical transformations within the soil are facilitated; sulphuric acid forms with iron, compounds which may be either useful or hurtful to vegetation, according to circumstances. In a loose, well aerated soil, abundantly supplied with lime, iron sulphate may act as an oxidizing agent, reducing to available form both organic and mineral substances, any excess of sulphuric acid which might be liberated in this action being neutralized by the lime; but if lime be scanty and the soil is so close grained as to be almost impervious to air, the sulphate may be reduced to sulphide, a substance actually poisonous to plants. Whether either of these theories is the correct explanation of the behavior of clover on the soils of this region we do not yet know. What we do know is that the injury to clover from continued use of acid phosphate on these soils is a demonstrated fact, and not a theory."

COWS IN CLOVER.

Editor Southern Planter:

In our frequent trips through the country we look with hopeful optimistic eyes, with an earnest desire to see Eastern Virginia reach that degree of agricultural development to which, by reason of location, soil, climate, markets, and many other advantages, it is so fully and justly entitled.

Sometimes we see prosperity in "pigs in the peanut patches"; but last week we saw "contented cows chewing the cud in crimson clover," literally and truly up to their udders in clover and as full as ticks.

In making quite an extensive trip last week we noted carefully and with pleasure the numerous patches of crimson clover which thickly dotted the face of the country. This clover is getting to be quite a favorite with our people. It is sown largely in the corn fields in the fall of the year, and not only furnishes a nice lot of grazing during the winter, but after the stock is taken off in the early spring, the clover shoots up quickly and heads out, making as pretty a picture as one could wish to see.

A portion of this clover is cut for forage, just the same as red clover, but most of it is turned under to supply humus to the soil, in which we all know that Virginia soil is so deficient. It is deficient because man has steadily drawn out of nature's bank the soil fertility deposited therein, until his drafts are not honored as satisfactorily or as promptly as he expects or wishes. It is man's fault, however, and he must treat his land as he treats his bank—must make deposits therein as well as drafts thereon.

The advantage of growing this crop is seen at once. It is sown in the fall, after one or two crops have already been taken from the soil, and it is harvested or turned under in the spring in time to plant the spring or early summer crops. It also pays its way as it goes, in the grazing which it affords, through the winter, for sheep, calves, milk, stock, etc. It is also a fine thing for poultry to get access to in the winter time, as it helps the hens to lay.

If cured for fodder it must be cut quite early, as if allowed to get too ripe bad effects have been noted from feeding the same. The yield, under favorable circumstances, reaches an enormous amount, say, as much as four or more tons to the acre. Last year being a hard winter the stand was not as uniform as usual.

The face of the country is dotted here and there with these brilliant crimson patches of clover. At one farm we saw a fine herd of well bred Jersey cows grazing in clover, which was fully two feet tall. The clover patch embraced fully ten acres, and we never

saw such a look of contentment on the face of an animal as we saw on the faces of that herd.

The entire herd were all as round as barrels, and their well-filled udders were actually dragging in the clover. The cost of the crimson clover crop is light—only about \$1 per acre for the seed. If sown at last working of the corn, the seed is covered and the corn cultivated at one time, one effort, one motion, practically reducing the entire cost of the crop to \$1 per acre.

With crimson clover for a winter cover crop, and the cow pea as a summer cover crop, the farmer, who is so disposed, can give his land plenty of humus, and at the same time can grow other crops thereon for profit.

The farmers of the State of Virginia should see to it that all their unused or unoccupied plow land should be covered either with crops to sell and feed on the farm or with crops to turn under for future plant food, for humus or what may be termed green manure.

Treat the soil liberally and it will respond liberally. The crimson clover patches are just so many smiles on the beautiful face of old dame nature, while the bare, uncovered, unsightly patches of unproductive land are just so many frowns.

If liberally and sufficiently tickled with the cow pea crop and the crimson clover crop, the whole face of nature would wear a broad grin. It don't cost much to tickle. Isn't it better to tickle and get a smile rather than abuse and get a frown?

Norfolk, Va.

A. JEFFERS.

Crimson clover should always be cut for hay before it comes fully into bloom or the seed forms. When the seed forms the hay is dangerous to feed to horses from the fact that the hulls of the seed are so formed that they mat together in the stomach and form balls, which horses cannot pass through the bowels, and they thus cause death. We have had several of these balls sent to us as large as a good sized orange, taken from the bowels of horses which have died. We have never had any report of danger caused to cattle from this cause. It would seem that the ruminating animals break up the balls in the action of cudging the food, and hence their escape from injury. Still even for cows it is well to cut the clover early, as it contains the most nourishment in the stalk and leaves before the seed is formed.—Ed.

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Trucking, Garden and Orchard.

WORK FOR THE MONTH.

Gathering the early ripening berries and fruits and picking peas and snap beans and cutting cabbage and the marketing of this produce, with the necessary attention required to be given in the way of planting successional crops of vegetables and cultivating the growing crops of all kinds, makes the month of June one of the busiest in the whole year in the garden and truck fields. Though the days are now the longest of the year, they are none too long for the work requiring attention. Watch the fruits carefully as they ripen, and do not wait too long before commencing picking, as they ripen very rapidly when once they commence to turn, and soon pass their best. Have ready baskets and crates for shipping. Let them be new and clean, and have the crates stencilled with your name or the name of your farm, and then be careful to put only the best of your products into them, and thus make a reputation for yourself and your products, and they will sell themselves. Cull your shipments carefully and let them be distinctly marked "firsts" and "seconds." Keep the culls at home and either dry them or preserve or can them, and thus help to keep up the market price of the best. Let all products be carefully cooled off before being crated and shipped, and see that they are well ventilated in the packages. Have your arrangements made with the commission men in the different markets to which you ship beforehand, and learn what particular style of packages are most salable and at what time to have them on the market, and be careful to follow the advice given. If possible, let growers in a section work together in the shipping of their products, and let them all go through one central organization, which should be managed by a good business man, who is in close touch with all the markets accessible, and can thus distribute the products in such a way as to secure the best prices. It is very little use or profit to raise fine products for the market and then to ship them in a haphazard way. Thousands of dollars are lost every year by such methods. In many sections good local markets can be built up for a limited quantity of all kinds of garden products by giving attention to the wants of the people and supplying these promptly, and it pays well to cater to this kind of trade where time allows.

Plant successional crops of pole, Lima and butterbeans and of corn and black eye peas. Canteloupes and watermelons may still be planted, though it is getting late for these crops. Cucumbers may be

planted for pickles and tomato plants be set out for a crop to succeed those planted in May. Keep the cultivator running in the early planted crops and stimulate their growth as much as possible by working amongst them with the hoe. If any crop should not appear to be growing as freely as it ought give a dressing of nitrate of soda at the rate of 150 pounds to the acre around the plants, but not on them.

Keep a good lookout for insect and fungous pests, and consult the Spray Calendar in the March issue for remedies. Dust or spray the Irish potatoes and egg plants with Paris green to keep down the potato bugs. Spraying the potatoes with Bordeaux mixture will prevent damage by blight. This spraying should be repeated several times during the season, so as to prevent both the early and late blight. This will result in a much better yield of tubers and pay well for the labor and trouble.

The cucumber pickle crop is one for which there is a large demand, and it is a crop which can be grown at a distance from markets, as the pickles can be put into brine as gathered and then be shipped in barrels when all harvested. Plant in hills three or four feet apart and fertilize liberally with a fertilizer having about 5 per cent. ammonia, 7 per cent. phosphoric acid and 8 per cent. potash. A mixture suitable for this crop may be made by taking 250 pounds nitrate of soda, 550 pounds cotton seed meal, 900 pounds acid phosphate, and 300 pounds muriate of potash to make a ton. Apply at the rate of from 400 to 600 pounds to the acre.

Fall planted onions should be pulled as soon as the tops begin to turn and be left on the ground for a few hours to dry, and then be brought under cover and the tops and roots be cut off and the bulbs be nicely dressed and crated and be sent to market. These onions will not keep long, but usually sell well before the spring planted dry onions come on the market.

Celery seed should be sowed this month. Make the plant bed in a cool, shady, moist place. Work it fine and make it rich. Sow the seed thinly and rake in lightly, and then water freely and spread mats over to keep in the moisture. The seed germinates slowly. Watch for the young plants and raise the mats as they appear, so as to give them room to grow, and gradually remove altogether, and keep the

plants growing by keeping moist and stirring amongst them with a small fork. They should be ready to set out in the rows where they are to make the crop in July and August.

After the strawberries have been picked, if the bed is only a year old, mow off the leaves and trash, and after these have dried set a fire to them when the soil is damp and let it run all over the bed, but see that it is not sufficiently strong at any place to burn the crowns of the plants. This burning destroys all fungous and insect pests. Bar off the plants with a plow and bring into compact narrow rows, and then thin the plants in the rows and take out all weeds. When this work is done plow the soil back to the plants and work out the middles and keep cultivated so as to keep down weeds. Beds two years old or over should be plowed up and the land be put into some other crop. Land for new beds to take the place of the old ones plowed up should be selected and be got ready for planting in the fall. Cow peas may be planted on this land with advantage to the future crop, and be cut for hay in August.

Stop cultivation in orchards, especially in pear orchards, this month, and sow in cow peas to shade the ground and improve it. Continued cultivation after this time has the result of causing the growth of new wood, which has not time to become matured sufficiently before winter to become fruit bearing wood. The checking of this new growth, especially in pear orchards, will do much to check "fire blight." Short, well ripened spurs and fruit wood is much less liable to the attack of this blight than long, sappy growths.

FRUIT PROSPECTS IN VIRGINIA.

Whilst the April frosts undoubtedly did much damage in middle, eastern and southern Virginia, especially to peaches, plums and early apples, yet in the strictly fruit belt of the State, Piedmont and the Valley, the lateness of blooming saved the crop both of peaches and apples, and we have good reports from this section, especially as to apples. There is at present every prospect of a good crop of winter apples. We shall esteem it a favor if orchardists will report to us on the prospects of the crop for publication in our July issue.

BUDDING TREES.

The months of June and July are those in which the budding of fruit trees, roses and other trees and

shrubs to which this method of propagation is applicable should be done. The work must be done whilst the stock is in a state of vigorous growth, and when the sap is running freely, so that the bark can readily be raised from the wood. An incision is made lengthwise through the bark of the stock with a small cut at right angles at the top, the whole somewhat resembling the letter T. A bud is then taken from a shoot of the present year's growth of the variety desired to be propagated. This bud will be found at the juncture of the leaf and shoot, just within the footstalk of the leaf. Shave off the bark with this bud and leaf stalk attached with a small part of the wood directly under the bud. This piece so shaved off is then to be inserted in the cut made in the stock by raising the bark on each side of the cut made lengthwise in the stock. The bud should be pushed well down under the bark and then the bark be laid on it and be fastened there by a bandage of bass matting or corn husk or other soft ligature. Let this bandage cover all the cut portion except the bud itself and cut the top of the inserted portion so that it will fit closely into the cross cut made in the stock. Cut off the leaf on the bud, leaving about an inch of the footstalk of the leaf to hold it by when inserting in the stock. In about ten days adhesion will have taken place and the bandage may be removed. The bud will remain dormant until next spring, when, if the work is properly done, it will start into growth. As soon as this takes place cut off the stock a few inches above the bud and keep all other buds on the stock from growing, and thus throw all the strength of the stock into the new bud. The essential requisites for success in budding are, first, a thrifty, rapidly growing stock, so that the bark will peel freely; second, the proper time, not so early that there will be too little cambium or mucilaginous cement between the bark and the wood for the adhesion of the bud, nor so late that the bark will not peel freely; third, buds sufficiently mature. A keen, sharp knife with a flat blade and handle is needed to do the work. Tie in the buds carefully, but not with so great pressure as to injure the bark or bud or prevent the flow of the sap.

NAVY BEANS.

These beans are always a most salable crop in Southern markets. They may be planted in this month and July and will on land in a fair condition of fertility make a good crop. Plant in rows 2 feet 6 inches apart dropping the beans 6 or 8 inches apart in the rows. Cultivate frequently but only when the plants are dry or they will rust.

Live Stock and Dairy.

STOCK BREEDING.

Editor Southern Planter:

It may seem strange to some, but it is nevertheless a fact that a great majority of persons, go plodding along in the old ruts, worn deep, by those who have gone before.

If the Almighty had intended that we should follow the lead of others in everything and not think for ourselves He would not have given us all minds, and reasoning power. I really sometimes think he did not give us all reasoning faculties, judging from the course taken by a great many in not thinking for themselves, but accepting what Jones, Brown, Smith, and others say as the gospel truth. It doubtless is a fact that Jones & Co., do know more about some things than any one else possibly; but they do not know it all by any means. We know Jones is a great cattle feeder and we can all perhaps get a pointer from him in the feeding line, we know that Brown is a great authority on sheep and Smith on alfalfa clover and other farm crops, but what does Jones know about raising the best and largest crops of hay, wheat, corn and oats, no more than Smith knows about stock-feeding and breeding, while Brown cannot tell an unroached mule from a horse, but still we find a great majority of Jones & Co.'s neighbors taking their advice on any and all subjects simply because each of these parties has made a success in their special line.

When a leader in a community starts to raising cattle and hogs all his neighbors fall in line. When a leader starts to raising fruit, they all set out big orchards and consequently over-do the business; when cattle and calves are high you will see farmers running around buying all the calves paying enormous figures for anything in the shape of a six to eight weeks old bull calf, but when the bottom drops out of the cattle market and calves can be bought at any price, then these same farmers will be saying, "No I am not buying any calves, cattle are too low, they are not worth the cost of raising, etc." Now it strikes men like myself, who may be do not know, that the time to buy any stock is when it is begging a buyer, and the time to sell is when the buyer is begging a sale.

"Old Hutch's" and Joe Leiter's big deals in the grain market caused others to go broke in trying to follow their examples. The phenomenal success of the railroad ticket, freight and telegraph operator, C. W. Williams, in breeding two mares and getting

world-beaters on the race course also caused men to lose their last dollar in trying to follow his lead.

I was amused last fall to hear a gentleman (who had made over \$400,000 in the stock market on grain and who bought two Percheron mares and a suckling colt for three thousand dollars) say that after advice from his physician to engage in some out door business in the country he studied the stock-breeding business and decided that he would breed Percherons, as he was less liable to lose money, even though he failed to make a success, or money out of the business. I think this gentleman was sensible, as every man is not going to succeed or make a fortune breeding Percherons, no more than others fail to get rich feeding cattle, hogs, sheep or crop-raising. The "Great Being" is supposed to have made us all for a calling, but no two alike, or with the same ideas exactly. While I could not make a dollar preaching, some ministers get as much as \$10,000 a year. I could not make a living raising sheep, and a great many other kinds of stock, but some men have accumulated fortunes in the sheep business.

But in whatever line you start begin right and keep it up, do not become discouraged, if reverses come, but give the business a good, long and fair test, and remember that "faint heart never won fair lady," and no more will a "chicken-hearted chap" win fame or fortune in the stock breeding business.

Rockingham Co., Va.

JOHN F. LEWIS.

HORSES AND AGRICULTURE.

Editor Southern Planter:

At this season most farmers have their attention called to the subject of more horses for the fields, and with the active demand for all classes in the markets, are likely to be thinking of mating the mares about this time. The farm needs horses or mules and it needs good ones, animals with weight enough to properly do the work required of them. The team should be of sufficient weight to take a good sized plow steadily a full day and to continue as long as the soil is in condition, and work any other up-to-date farm machinery.

Virginia is not over-supplied with such teams. I often hear the remark that heavy horses are not suited to this State, but having tried the heavier animals am satisfied there is no foundation for such a conclusion. They are as well adapted to this State as to others.

The average Virginian sees no beauty and no merit

in the purely draft breeds. His eyes are for speed and the indications of it.

Virginians have used the little horse because they had no other, and for want of power have used the little plow and only half done their work. *The curse of Virginia farming is the little horse and the little plow.*

Light horses have their uses but doing heavy farm work is not one of them. A light driving team is not out of place on a large farm but the greater number of the horses on the place should be heavy, and there is no better way to get them than to breed them.

Colts are easily and cheaply raised in this State, but they require something better than south wind and rain water for feed, and the protection of the pine grove from winter storms, if they are to acquire a proper growth.

I hope to see greater interest taken in the matter of draft animals and to see in the near future a proper appreciation of the value of the tons and tons of stalks, stubble weeds and grass that are now with a vast amount of labor gleaned and burned when they should be turned into the ground to form that much needed humus. The little horse and little plow must go first. So long as they stay we shall see with each recurring spring millions of dollars expended for fertilizers, and millions more of worth destroyed by fire for want of the proper power to convert it to its proper natural use, and so the annual holocaust goes on.

I do not contend that dead weeds or old corn stalks of themselves have a great amount of fertilizing value. Their greatest worth lies in their power to absorb soil water and to retain it charged as it is with the elements of fertility and thus to rot down into humus. The tender rootlets find in this an easy place for development and their natural food in proper condition for assimilation.

Let us hope that the day may soon come when a proper understanding of these matters will be had by all our farmers and better methods adopted.

B. F. WRIGHT.

James City Co., Va.

RATIONS FOR DAIRY COWS.

We have for years been urging upon the farmers of the South the importance of the silo as an adjunct to the farm, and have given repeatedly instructions for the building of cheap silos. A recent experiment at the Ohio Station shows how great an economy can be made in the rations of dairy cows by the use of silage as feed, and thus emphasizes what we have so

long urged. In reporting the experiment, Prof. C. G. Williams says: "The prevailing high prices for grain feeds in the face of very moderate prices for dairy products have reduced the dairyman's profit to a point where it is a question with him whether he can make the cow pay for the large grain ration he has been accustomed to feed. If he can dispense with half the grain he has been feeding without materially reducing his production of milk and butter fat his chances for profit have increased. During the winter and spring of 1904 the Ohio Station conducted an experiment with 10 dairy cows, representing five different breeds, to determine what effect the feeding of more silage than is usually fed by dairy-men with a corresponding reduction in the grain portion of the ration might have upon the reduction of milk, butter fat, gain in live weight, cost of the ration, and consequent profit. The general plan of the experiment was to compare two rations which should carry as nearly as possible the same amount of dry matter and nutrients. In one ration these nutrients were to be derived largely from roughage, mainly silage, in the other ration no silage was to be fed, and as little roughage as seemed wise, the milk of the nutrients being derived from concentrates. The two rations fed carried practically the same amount of dry matter. In one over 50 per cent. of this dry matter was derived from silage, and less than 18 per cent. was derived from grain. In the other over 57 per cent. of the dry matter was derived from grain, no silage being fed. The silage used in this test was a mixture of one ton of soy beans and cow peas to two and one-half tons of silage corn. There were nearly twice as many soy beans in the mixture as cow peas. The silage corn was very low in dry matter, owing to an unfavorable season. The silage as fed contained 18.63 per cent. of dry matter, 2.36 per cent. of protein, 4.68 per cent. of crude fibre, 0.92 per cent. of fat, and 9.36 per cent. of nitrogen free extract being richer in protein and poorer in carbohydrates than average corn silage on account of the admixture of soy beans and cow peas. The figures used in estimating the cost of the different rations were as follows: Silage, 10 cents per hundredweight; hay, 30 cents; stover, 20 cents; wheat bran, 93.7 cents; corn meal, \$1; oil meal, \$1.16 1-4; butter, 25 1-2 cents per pound; and skim milk, 15 cents per hundredweight. The value placed upon a ton of silage is based upon that of the corn and stover grown upon similar ground and marketed as such. For instance, upon ground on which we average 50 bushels of shelled corn per acre we grow 15 tons or better of silage corn. The 15 tons of silage corn, therefore,

may be said to be worth the market value of the 50 bushels of corn plus the one and one-fourth tons of stover which will go with it. We find the expense of putting an acre of corn into the silo to be practically the same as shocking, husking and cribbing the grain and hauling off the stover. We have here charged 51 cents per bushel for corn on the average for the period covered by the test, and \$4 per ton for stover. This will make the acre of silage corn worth \$30.50 or \$2.03 per ton. The price credited for butter fat is based upon the wholesale price of Elgin butter as quoted in current publications. The customary one-sixth is added to the fat for the butter equivalent. Eighty per cent. of the total milk yield is assumed to be returned as skim milk. The cows fed the silage ration produced 96.7 pounds of milk and 5.08 pounds of butter fat per hundred pounds of dry matter, those fed the grain ration produced 81.3 pounds of milk and 3.9 pounds of butter fat. The cost of feed per hundred pounds of milk was \$0.687 with the silage ration, and \$1.055 with the grain ration. The cost of feed per pound of butter fat was 13.1 cents, with the silage ration and 22.1 cents with the grain ration. The average net profit per cow per month (over cost of feed) was \$5.864 with the silage ration and \$2.465 with the grain ration. Comparing the average daily product of each cow for the entire test with her average daily product for the month previous to the change in ration (or the first month of their test in the case of two cows) the cows fed the silage ration shrank 2.84 per cent. in milk and gained 1.89 per cent. in butter fat production. The cows fed the grain ration shrank 9.11 per cent. in milk and 14.18 in butter fat production. Upon the conclusion of the experiment each lot of cows was found to have gained in live weight, the silage fed cows an average of 47 pounds per head, the grain fed cows an average of 57 pounds per head. The facts reported seem to justify the conclusion that silage can be made to take the place of a considerable portion of the grain ration. It is believed that by growing more of the feeds rich in protein, clover, alfalfa, soy beans, cow peas, field peas, vetches and ensiling them or feeding them as hay, it will be possible to further reduce the amount of grain fed."

We commend the foregoing to the careful attention of our readers. There is still ample time to put in corn or sorghum for silage and to grow with it or alone either cow peas or soy beans. With the use of these feeds, which can be cheaply and economically grown in the South (we have repeatedly reported corn silage grown and put into the silo at less than \$1 per ton in the South, which is less than one-half

the cost of the silage used in the experiment reported), the cost of feeding cows can be reduced very materially and the profit on the production of milk and butter be more than doubled.

THE HORN FLY.

This pestiferous insect is likely again to trouble cattle owners as soon as the weather becomes warm. Do not let your cattle suffer from the pest and lose money yourself into the bargain. Dr. Spencer, of the Virginia Experiment Station, has been laboring with the problem of destroying the fly, and has achieved success by spraying with kerosene emulsion, made by the following formula: Yellow soap, one-half pound; soft water, one gallon; kerosene oil, two gallons.

Shave the soap fine and dissolve in the water at boiling temperature. Place kerosene oil in a barrel containing a spray pump, and then add the hot soap solution. Churn vigorously through the pump for fifteen or twenty minutes or until the whole mass becomes like thick cream. One gallon of water should be now added to prevent the solution becoming thick. Keep this as the stock solution and dilute for use in the proportion of one part to five of water and thoroughly mix. Only the required amounts must be mixed for one application. In order to apply this effectually a shed should be built, into which the cattle can be driven one at a time, and this should have nozzles connected, affixed on the side and above and below, so that when the pump is worked the spray may be blown all over the animal in the shed. For full information as to how to arrange the shed, nozzle and pump, send for Bulletin 153 to the Director of the Virginia Experiment Station, Blacksburg. At the Station daily spraying for two weeks reduced hordes of horn flies to a point of insignificance. The eggs of this fly are deposited in fresh dung on the pastures. The larvæ may be killed by treating this fresh dung with lime, and thus lessen the number of flies bred.

ABERDEEN ANGUS CATTLE.

Editor Southern Planter:

Every fair minded man allows others the privilege of having opinions of their own, even if different from his, and not supported by facts.

I have been very glad to see the articles in the past few numbers of the *PLANTER* regarding the good qualities of the Aberdeen Angus and the Hereford cattle, although somewhat surprised to read the arti-

cle of one man disparaging the Angus. I never knew of a reputable breeder doing that before, regarding any breed of cattle. There is certainly enough room for all of us. We are all entitled to our opinions, and it is good to let people know them; it stirs up interest in improved cattle, whether Short-horn, Hereford, Angus or other breeds. I propose to give a few facts and figures which are official and not based upon what I or any one else thinks.

In Mr. Stacey's article in the April number he reports Governor Sparks, of Arizona, saying, among other things, speaking of the Hereford: "They produce the class of beef that sells first and for the most dollars, whether off the ordinary farm or range." I am not disputing the fact that this may have been his experience, but at the Exposition sales at Chicago at the first four Expositions 261 carloads of cattle sold as follows: 123 loads grade Aberdeen Angus at an average of \$7.09 per cwt.; 81 loads of Hereford at an average of \$6.86 per cwt.; 37 Shorthorns at an average of \$6.53 per cwt.; the Aberdeen Angus selling for 23c. per hundred more than Hereford and 56c. per hundred more than Shorthorns.

At the International Exposition, 1904, 50 carloads of fat steers were sold; 19 loads of Aberdeen Angus for an average of \$8.27 per cwt.; 22 loads of Hereford at an average of \$7.35 per cwt.; 9 loads of Shorthorns for an average of \$7.41 per cwt.; the Aberdeen Angus breaking the previous record by selling for 92c. per hundred more than Hereford, and 86c. per hundred more than Shorthorns.

In the past sixteen years the Aberdeen Angus have furnished the highest priced carload of cattle for fifteen years, fourteen of those years being consecutive, as follows:

	Per cwt.
1889. R. B. Hudson, Carrollton, Mo.	\$7.10
1890. Thos. Brandon, Carrollton, Mo.	7.40
1891. W. C. White, Carrollton, Mo.	7.15
1892. J. D. Eubank, Slater, Mo.	7.00
1893. W. C. White, Carrollton, Mo.	7.00
1894. J. Evans, Jr., & Son, Emerson, Ia.	6.60
1895. W. C. White, Carrollton, Mo.	7.00
1896. L. H. Kerrick, Bloomington, Ill.	5.90
1897. L. H. Kerrick, Bloomington, Ill.	6.00
1898. J. Evans Jr., & Son, Emerson, Ia.	6.25
1899. L. H. Kerrick, Bloomington, Ill.	8.25
1900. L. H. Kerrick, Bloomington, Ill.	15.50
1901. Chas. Escher, Marengo, Ia.	21.50
1902. Chas. Escher, Marengo, Ia.	14.50
1904. Chas. Escher, Marengo, Ia.	12.25

In 1901 Chas. Escher's load was sold at Pittsburg, where they won championship, the balance of these

sales were made at Chicago, the greatest live stock market in the world.

In 1903 the Angus carload was awarded by the judge the grand championship, but on some technicality they were thrown out of the competition entirely, the stockyard buyers gave for the Angus an average 37c. per hundred more than for the Herefords, and 70c. per hundred more than for the Shorthorns, and this was an off year for the Angus. My article in January number tells you what they did in 1904. If you are an admirer of the "breed that beats the record," look back and read it. It will do your heart good and cause you to thank God for such noble animals.

Now, for 1905. The year is young, but on March 21st-24th there was a public sale at Chicago of breeding stock of four beef breeds, Galloways, Herefords, Shorthorns and Aberdeen Angus.

The Galloways sold as follows:

10 females for	\$1,115, an average of \$111.50.
7 bulls for	512, an average of 75.00.
17 head for	1,627, an average of 96.00.

Shorthorns:

24 females sold for	\$2,895, an average of \$120.00.
18 bulls sold for	1,975, an average of 109.00.
42 head sold for	4,870, an average of 113.00.

Herefords:

42 females sold for	\$3,820, an average of \$ 90.95.
20 bulls sold for	2,430, an average of 121.50.
62 head sold for	6,250, an average of 100.00.

Aberdeen Angus:

38 females sold for	\$7,010, an average of \$184.00.
21 bulls sold for	3,265, an average of 155.50.
59 head sold for	10,275, an average of 174.00.

The above are facts, prices they have sold for to be butchered and prices they have sold for during past two months for breeding purposes. These are facts which cannot be controverted. My opinion or the opinions of others will not change them.

I don't know that it is necessary to say any more, but this: Anyone who has ever handled cattle knows there never was and never will be a breed of horned cattle as docile as the hornless ones. If they are, why is it necessary to saw off horns? Why do the great packers pay more for hornless cattle than horned ones? Don't forget the Angus are hornless, and transmit lack of horns to 90 per cent. of their offspring when bred to native cattle.

I trust I have not wearied any of your readers, and thank you for the privilege of using your columns. I have no Angus for sale, and only write to give facts.

R. L. JAYNES.

Benvenue Farm, Spotsylvania Co., Va.

SOME TROUBLES OF SWINE.

Within the past year a large number of reports have come to this office from different parts of the State of what appears to be a paralysis of the back and limbs of hogs. The young pigs are the ones most generally affected. The cause has been found to be from over-feeding young, growing pigs on an exclusive diet of corn and water. Fat is put on the pigs too rapidly, with the result that the weak bones of a growing pig cannot support the rapidly-put-on flesh. The first symptoms noticed are that the pigs refuse their feed and walk rather stiffly, continuing to grow worse until they can barely raise themselves upon their front legs. The pigs die of starvation, as they cannot drag themselves to the trough.

Treatment.—To prevent young pigs getting sick, a very small amount of corn should be fed them while nursing their mothers. Then gradually increase the amount of corn. When weaned, feed ground feed of bran, shorts, corn, and a little bone-meal mixed with sufficient milk to make a thin slop.

After young pigs are paralyzed it is best to take all corn away from them and see that they are placed at a trough of milk in which has been stirred bran and the following tonic, which is recommended by the Bureau of Animal Industry as a preventive against hog-cholera and swine-plague, and which is also a very good tonic for hogs:

Pounds.

Wood charcoal	1
Sulphur	1
Sodium chloride	2
Sodium bicarbonate	2
Sodium hyposulphate	2
Sodium sulphate	1
Antimony sulphide (black antimony).....	1

These ingredients should be completely pulverized and thoroughly mixed. The dose of this mixture is a large tablespoonful for each 200 pounds weight of hog to be treated, and it should be given only once a day. When hogs are affected with these diseases they should not be fed on corn alone, but they should have at least once a day a soft feed, made by mixing bran and middlings, or middlings and corn meal, or ground oats and corn, or crushed wheat with hot water, and then stirring into this the proper quantity of the medicine. Hogs are fond of this mixture; it increases their appetite, and when they once taste of food with which it has been mixed they will eat it though nothing else would tempt them.

Animals that are very sick and that will not come to the feed should be drenched with the medicine shaken up with water. Great care should be exercised in drenching hogs or they will be suffocated. Do not turn the hog on its back to drench it, but pull the cheek away from the teeth so as to form a pouch, into which the medicine may be slowly poured. It

will flow from the cheek into the mouth, and when the hog finds out what it is, it will stop squealing and swallow. In our experiments, hogs which were so sick that they would eat nothing have commenced to eat very soon after getting a dose of the remedy, and have steadily improved until they appear perfectly well.

This medicine may also be used as a preventive of these diseases, and for this purpose should be put in the feed of the whole herd. Care should of course be taken to see that each animal receives its proper share. In cases where it has been given a fair trial it has apparently cured most of the animals which were sick and has stopped the progress of the disease in the herds. It also appears to be an excellent appetizer and stimulant of the processes of digestion and assimilation, and when given to unthrifty hogs it increases the appetite, causes them to take on flesh and assume a thrifty appearance.

WORMS IN HOGS.

Hogs affected with worms in the intestines run down in condition, become very thin and lank, back is arched, eyes dull, refuse feed, walk stiffly, and appear lifeless. The worms may be very numerous, in bad cases completely filling the intestines. The pigs die if not treated. To secure the best results, affected hogs should receive individual treatment. Twenty-four hours before administering treatment very little feed should be given them. Then give the following medicine as a drench, to each one hundred pound hog; larger or smaller hogs should receive a dose in proportion:

Oil of turpentine.....	4 drachms
Liquor ferri dialysatus.....	$\frac{1}{2}$ drachm
Raw linseed oil	6 ounces

If necessary, repeat the dose in four days. After worms have been removed, give the tonic recommended above, to put the pigs in condition.

TUMORS ON PIGS AFTER CASTRATION.

Causes.—Bunches form on the cords of pigs after castration as a result of infection from dirty instruments or hands, etc., during the operation; or from leaving the cord too long, thus increasing the liability of its becoming infected. These tumors continue to grow, and in the worst cases attain the size of a man's head.

Treatment.—Cut down on the tumor the same as in a simple case of castration. Separate the skin from the tumor and then follow up the cord with the hands. Cut the cord off as high up as possible. The wound may be healed by the use of any of the common disinfectants. A teaspoonful of carbolic acid in a quart of water may be used once daily until the pigs are healed. Pigs should be kept in a clean pen after the operation.

C. L. BARNES.

Vet. Dep. Exp. Station, Kan.

The Poultry Yard.

POULTRY NOTES.

June may be considered a summer month, and all summer months give the poultryman more care and real work than the winter months, because he has many more things to look after and work of all kinds pressing. To take a day occasionally and "clean up" will not do with young stock. They must have constant care, every day must be a "clean up" day. Laying hens require more care than in winter months, as vermin breeds' more rapidly, hens will get broody and must be kept off the nests or they will attract lice and mites into the nests and soon everything about the houses, nests, coops and yards will be infested. Spray the roosts, nests and coops every week with the crude carbolic acid and kerosene mixture, and dust all the males once each week with some good lice powder. Spray the whole interior of the house this month with whitewash and add one pound of caustic potash to each pail full of lime wash. This will kill every living thing that it touches in the way of vermin.

Plow and reseed the runs and yards this month. This will purify the soil and provide young, tender grass and herbage for the growing stock. Broadcast air-slaked lime on the land after it is plowed and before it is harrowed, and if any gape worms are in the runs and yards this will help very much to check this insidious foe to young chicks.

Where chicks are reared with hens they must be watched and dusted for the large body lice and also for head lice or ticks. Insect powder rarely kills these ticks. Make an ointment as follows for this purpose: Sweet butter 4 ounces, sweet oil 2 ounces, Scotch snuff 1 ounce. Rub all together until thoroughly incorporated, then rub a very small quantity into the head and neck feathers of chicks and young turkeys. Repeat in six days, and if thoroughly done you will be rid of this pest. Never put kerosene on young chicks or poults, as it is almost sure death.

I am not quite sure that it is profitable to hatch chicks, many at least, late in this month or in July or August, but we will continue to hatch to the end of the month. Incubators must have close attention, especially during hot days. When the outside temperature gets to 85 or 90 degrees there is very little ventilation in the machine, and unless some provision is made by opening the door of the incubator or by airing the eggs during the warmest part of the day many of the chicks will smother. Sitting hens seem to know this by instinct and often leave their nest and eggs for hours during a hot, sultry day.

We have very much to learn yet about artificial incubation. It is really amusing to note the changes in the instructions sent with the incubators by the manufacturers. I will give but one instance. One manufacturer gives these instructions for 1904 in regard to moisture and ventilation: "An egg is supplied with an abundance of moisture (water) to hatch successfully under all circumstance and conditions, except possibly in very dry locations, and our machine requires no moisture." In 1905 this same manufacturer says in his new book of instructions: "A little moisture supplied on the fifth day will be beneficial and continue to supply moisture through the lamp until the eggs begin to pip, then take a big bunch of waste, good and wet, and place it in the machine on the back part of the egg tray; this will supply sufficient moisture to insure a successful hatch. Soak the waste in water at a temperature of 100 degrees. It is good practice to also sprinkle the eggs very thoroughly by means of a flower spraying bulb or whisk broom, with water at 100 degrees." Now, good reader, which is right? Let me tell you. Neither one and both, according to the condition of the eggs, the room, the weather. *You must know* these conditions and govern yourself accordingly.

In regard to ventilation, the book for 1904 says: "Start the hatch with the ventilator slide one-fourth open and finish with it wide open." In 1905 the book says: "Leave the ventilating slide one-fourth open the first five days, after that period the method of operating the vent will depend entirely on the size of the air cell in the egg. Aim, however, to keep it open as much as possible until the eggs begin to pip, when it should be closed tight and kept closed until the conclusion of the hatch." Now, what are you going to do about it? Learn *how* by experience, and hang these instructions. Keep your laying stock healthy, do not inbreed too much, set only good, fresh eggs, set a hen at the same time you do the machine and compare the eggs often, learn from the hen. Years ago I knew more than the hen, now she is my teacher. Let me tell you my experience. Some twelve years ago I bought my first incubator. *I had no further use for sitting hens. Let them lay eggs.* I had a large flock of Light Brahmas, and among them was one that was blind in one eye, and she had a leg broken when a pullet, and it healed crooked. We called her our "show bird," as she attracted more notice than any one in the flock. Every visitor saw her. She layed five or six eggs and got broody. Much broody. One of my boys gave her 15 eggs in

an old ash leach. I protested. I had an incubator to hatch chicks. She was sitting where I saw her daily, and she seemed to take great delight in winking at me with her good eye every time I passed her nest. Every warm afternoon she would leave her nest and stand in the shade of the dairy building for an hour or two. I frequently told her she was lazy, good-for-nothing, but pet-pie, etc. I believe the meanest thing I ever said to her was when I called her a louse incubator. She gave me an extra wink or two and stayed off longer than usual. I told the boy that she was no good and wouldn't hatch a chick. If he wanted to raise chicks I would get him an incubator. I tested and turned and ventilated my eggs, and turned and ventilated and tested. I watched the air cell. I sprayed the eggs, then ventilated, turned and tested some more. The twenty-first day came and went, the twenty-second day passed into history, and so did my eggs. Not a shell was broken. In the deep shade of night I buried them deep down in the cool, moist earth to give them moisture. The next morning as I passed the ash leach I noticed a pleasant and motherly smile on the blind side of the "show bird's" countenance, and I paused long enough to call her "louse cage" and hurried on. When I returned the boy was there and had taken 14 good, strong chicks from her nest, had them in an old rimless straw hat, had her under his arm, and this is what he said: "She knows how, and you and your incubator don't," and she gave me that same knowing wink. Somehow and for some reason I found my hat several sizes too large all that day, and that evening when the boy retired, in addition to his usual "good night," he gave me that same *unfuf* wink, and asked, "Have you turned your eggs?" and he was gone.

CAL. HUSSELMAN.

Richmond, Va.

TURKEYS.

Editor Southern Planter:

It is almost impossible for some people to raise turkeys successfully. There are many theories in regard to turkey culture, but a peek of experience is worth a bushel of theories. The critical season for turkey raising is before us. It is a matter of great importance that the care of the young poults should be turned over to some one individual. The newly hatched turkey is very tender and has many enemies from its earliest moments until it is nearly half grown. Then they will thrive and grow without

much attention or care. Women who have a love for poultry make the best guardians for the young broods. Each brood should be looked after at night and counted as they go to roost. They can be kept from straying far from the house by feeding them at regular stated times during the day. While quite young they are very delicate and tender, and should not be allowed to wander through the wet grass and become chilled. They have no greater enemy than the head louse. (This is really not a louse, but a tick.) I have known one single tick to kill a young turkey. They must be watched and not allowed to become lousy. The newly hatched turkeys should not be fed for thirty-six hours, or until they show signs of real hunger. One of the secrets of successful turkey raising is the art of feeding properly at the proper time, and the most suitable food. There is nothing better for their first feed than bread soaked in sweet milk, and squeezed quite dry and fed very sparingly at first. Great care must be taken not to feed sloppy food at any time. A little curd occasionally improves their feed. They are very fond of this. Milk is better for them to drink than water. Over-feeding young turkeys on corn meal has caused more to die than any other cause. It suits some people to feed it because it is handy and easy to get. It should be sparingly fed. Young turkeys are very fond of rice well cooked and moist with sweet milk, and it is one of the best foods that can be fed. One can often get a low grade of rice reasonably cheap, and by buying it in large quantities get it at a discount. Plump well dressed turkeys not only bring a higher price, but add to the reputation of the producer. The turkey is one of the finished products of the farm and one of the greatest luxuries. They make fine pets when fed about the yard while young. I believe the reason so many fail is not with the bird, but with the breeder. I have frequently seen turkey eggs advertised thus: Flock headed by 52 pound tom, etc. This 52 pound tom heads the advertisement, but if he really heads the flock he is very fat (too fat) and worthless as a breeder. We must have good stock in order to have strong vigorous birds. The best stock should always be selected to breed from. Where they have unlimited range they will gather most of the food they require until autumn. It is very poor economy to stint young growing turkeys for once stunted it takes a long time to recover if they do at all. I will venture to say most of us will enjoy eating a portion of a fine fat, well fed turkey along about Thanksgiving.

Mrs. CAL HUSSELMAN.

Richmond, Va., R. 6.

The Horse.

NOTES.

The circuit of horse shows to be held under the auspices of the Virginia Horse Show Association during 1905 will play an important part in furnishing entertainment and sport of a high order during the present season. It is not an easy matter even to attempt an estimate of the good done the breeding interests of the State by these horse shows, which have appealed to and enlisted the support and patronage of our best people. The circuit opened with Keswick Show, which took place on May 25th and proved quite a success. The Leesburg Show is fixed for June 7th and 8th, after which comes the annual show of the Upperville Horse and Colt Club, which became a member of the Virginia circuit this season, and is the oldest organization of its kind in the United States, having been formed in 1853. List of dates follows: Leesburg, June 7th and 8th; Upperville, June 15th and 16th; Culpeper, July 4th and 5th; Fredericksburg, July 12th and 13th; Manassas, July 19th and 20th; Orange, July 25th and 26th; Front Royal, July 27th and 28th; Charlottesville, August 3rd and 4th; Staunton, August 8th, 9th and 10th; Harrisonburg, August 15th, 16th and 17th; Berryville, August 23d and 24th; Warrenton, August 30th and 31st; Lynchburg, October 3d, 4th, 5th and 6th; Richmond, October 10th, 11th, 12th, 13th and 14th; Norfolk, October 16th, 17th, 18th, 19th, 20th and 21st.

At a recent meeting of the Richmond Horse Show Association officers for the ensuing year were elected and other important business transacted. James T. Hyde, who is secretary of the New York Horse Show, was chosen as secretary of the Richmond Show, while Sidney C. Love, who takes an active part in the councils of the Chicago Horse Show, was placed on the Board of Directors. This indicates that the Richmond Horse Show will be in close touch with the big affairs at New York and Chicago, and that the annual affair to come off here this fall will be on a larger and more pretentious scale than ever. The officers include some of the most prominent men in Virginia. The list follows: President, J. T. Anderson; vice-president, John Kerr Branch; secretary, James T. Hyde; assistant secretary and treasurer, W. O. Warthen; executive committee, Henry Fairfax, John Kerr Branch, H. C. Beattie and J. T. Anderson. The following is the board of directors, J. T. Anderson, John Kerr Branch, John D. Potts, of Cincinnati; John Spratley, of Surry county; H. C. Beattie, of Henrico county; Henry Fairfax, of Loudoun county; James T. Hyde, of New York; Henry Stuart, of Russell county; W. H. White, of Norfolk; C. D. Langhorne, of Albemarle county;

R. F. Carman, of New York; Legh R. Page, of Richmond; Sidney C. Love, of Chicago; Alexander Hamilton, of Petersburg, and L. E. Johnson, of Roanoke.

The trotting stallion, Kelly, 2:27, in the stud of W. J. Carter, was selected as the riderless horse to follow the caisson at the funeral of the late Gen. Fitz. Lee last month. As with many highly bred horses Kelly seems absolutely fearless and the booming of artillery at the burial gave him little concern, but a pathetic incident connected with the affair was that as the body of the lamented general was being lowered in the grave the horse neighed loudly several times and then relapsed into his usual unconcerned manner. The elegant son of Electioneer and famous thoroughbred Esther is in all the glory of vigorous health now and as the result of his stud services in 1904 some grand looking foals have arrived. Among the richly bred youngsters to his credit here are a bay filly from Florence Miles, 2:21½, by Prophet Wilkes; a bay filly from Alice Ingram, by Norfolk; a bay filly from Carrie Whitehead, by Pilot Wilkes, and a bay colt, from Gipsey, by Ezekiel, son of Wilkes Boy, 2:24½. The latter, a large, handsome colt, died at birth from being smothered. The youngster was owned by Dr. Chas. H. Eppes, of this city, and highly prized.

Impressed with the generous patronage extended Kelly in this section and the promise of his produce, Mr. James Cox, of Belgravia Farm, Mount Jackson, Va., has shipped three of his get to Lexington, Ky., and placed them in the stable of the well known trainer, Geo. B. Hayes, for development. The trio are all trotters and consist of Lucy Montrose, bay mare, 6, dam Minnie Montrose, by Robert McGregor, 2:17½; Barlight, brown gelding, 5, dam Fannie Gray, by Sam Purdy, 2:20½, and Helen Wilmer, chestnut filly 4, dam Erena, 2:19½, a great brood mare, by Aleyone. Of the lot Hayes is especially well pleased with Barlight and he looks upon the big gelding, who is 16.1 in height, weight 1,200 pounds, as the making of a fast horse.

During the present season, as usual, Virginia bred horses are winning both on the flat and across country. The latter division promises to be a more important factor than during past years, as horses reared in the State have already been returned winners of some important steeplechase events. The winning division includes Imperialist, Flying Virginia, Ivan, Charawind, Punctual, Follow On and others.

BROAD ROCK.

Questions and Answers.

PREPARATION FOR TIMOTHY.

I have about two hundred loads of manure, made from feeding Timothy hay. I also have a plot of red land, deep soil, good clay, now in wheat. I want to seed this plot to Timothy, please state in your next paper the proper thing, do, cultivation, amount of manure, fertilizer, seedling, etc.?

Chatham Co., N. C.

ISAAC H. DUNLOR.

We would plow the land after the wheat is cut and then apply the manure at the rate of 10 or 15 tons to the acre broadcast on the surface and cut the same into the land with the disc harrow, working repeatedly at intervals till August and thus secure a fine seed bed for the Timothy which should be seeded in that month or September. With such land as you describe and with this application of barn yard manure, you should not need to use any other fertilizer in order to secure a good stand and crop. Seed about one peck to the acre.—Ed.

SALTPETER AS A FERTILIZER.

I mail you to-day under separate cover a copy of the Youth's Companion with a marked article on saltpeter or corn. Please consider the statements in this article and give us your comment on it?

J. D. PERKINS.

Grayson Co., Va.

The boy mentioned in the article referred to who won the premium by watering his corn with a solution of salt peter had evidently given attention to the study of chemistry. Saltpeter is chemically nitrate of potash. It analyzes usually from 44 to 45 per cent. of potash and 16 to 17 per cent. of ammonia. Both elements are most valuable plant foods and are in saltpeter in as available a condition for the nourishment of the plant as they are to be found in any substance. The only reason saltpeter is not usually advised for use as a fertilizer is because of its high price, it being used for many other purposes in the arts and business. It is worth at the present time about \$70.00 per ton, yet even at this price, we believe that it might be profitably used in many places as the saving in freight in using saltpeter to supply potash and nitrogen over the use of muriate or sulphate of potash and nitrate of soda would be very considerable. It would take 3,500 pounds of sulphate of potash and nitrate of soda to supply the same quantity of potash and ammonia as are found in 2,000 pounds of nitrate of potash (saltpeter), thus involving a saving of 1,500 pounds in the amount of material, which has to be hauled and paid for. The above quantity of nitrate of soda and sulphate of potash would cost about \$82.00 as against \$70.00 for the nitrate of potash. We believe that many of our tobacco growers might usefully and profitably apply nitrate of potash in their fertilizers for the tobacco crop. We should regard it as an expensive fertilizer to use in growing corn as suggested in the article.—Ed.

TOBACCO GROWING—COWS RETAINING AFTER-BIRTH—BEES.

1. Please answer through your columns if it is advisable to plant tobacco on land that was in corn the preceding year, previously in sod for two years, the corn had Crimson clover sowed in it. Is it advisable to use acid phosphate on clover at seeding? Is acid phosphate of any advantage to tobacco?

2. Can you give any reason for cows not dropping the

after-birth after calving? Out of seven calving in the winter four were troubled with retention of after-birth.

3. Can you or any reader give any advice as to bees? I have been keeping bees for a number of years but never had the trouble I have this spring. Out of fifteen hives I lost three, and all these had plenty of honey in store to feed the bees through until the new supply comes. My hives face the south. Is this objectionable?

Dinwiddie Co., Va.

GEO. SEDIVV.

1. There is no objection to tobacco following corn as a crop except that corn depletes the fertility of the land and as tobacco is a crop requiring a rich soil, it is always better that it should follow clover or Cow peas, which will have improved the land both mechanically and physically. Tobacco is not a crop calling for a large percentage of acid phosphate in the fertilizer used. Used in excess, acid phosphate has a tendency to cause a coarse "bony" tobacco.

2. The retention of the after-birth by cows is very frequent in case of animals that are in a low condition of health or have suffered from innutritious food or have been eating hay or fodder, which has been spoiled by the weather. Old cows are more subject to this than young ones, probably on account of diminished vigor. Sometimes the retention is caused by the drinking of cold water or eating of cold food immediately after calving. Care should be taken to give warm nourishing drinks to cows after calving and warm, easily digested food like bran mash.

3. The subject of bees is one to which we have never given any attention. We once tried to keep bees, but they would not let us go near them, having apparently a decided aversion to our presence, and as we never cared to keep any living things, with whom we could not be on terms of friendship, we got rid of them. Probably some one of our subscribers, say Mr. J. E. Thomasson, Bumpass, Va., can give you reliable advice on the subject.—Ed.

PEAR TREE DISEASED.

I have a Le Conte pear tree three years old, the leaves of which seem to be dying. They turn black from the tip, presenting the appearance of having been frost-bitten. It has been cultivated and manured with ashes and litter. Please tell me what to do for it. Two Kieffers of the same age which have received similar treatment have shown no signs of the disease.

W. E. SCOTT.

The pear tree is suffering from blight, commonly called "Fire blight." The Le Conte variety like all the best pears is especially subject to attacks of blight in the South. The only remedy is to cut out the blighted wood as soon as the disease appears, cutting back at least six inches below the part to which it is seen to have extended and burn the blighted wood at once. Such cutting usually results in a few years time in the complete destruction of the tree. There is very little pleasure or profit in planting the finer varieties of pears in the South. The Kieffer is the most blight proof of any pear grown. While the quality is nothing to boast of, yet if you must have pears, plant Kieffers.—Ed.

SWEET POTATO CULTURE—CORN FERTILIZER.

1. I have some medium black gravelly land I want to plant in sweet potatoes, it was in corn last year. How is the best way to prepare it? What kind of guano is best to use?

2. Some one has said that if pine tags are drilled in the

rows and the bed made on them it is a fine manure for sweet potatoes. What can you say of it?

3. Will lime be of benefit to sweet potatoes, if so when is the best time to use it, how and how much?

4. What is the best guano to use on corn, on black medium gravelly land, when to use it and how much, and in what way, after planting or before?

5. How should lime be used on corn and how much, when and how? T. G. P.

Halifax Co., Va.

1. Plow and break the land finely and put into good physical and mechanical condition. A good fertilizer for the crop may be made by mixing 320 pounds of acid phosphate, 360 pounds of cotton seed meal, and 150 pounds of muriate of potash, applying this quantity per acre. If the land is in a fairly good state of fertility, probably an application about one-half or three-fourths of the above quantity may be found sufficient to make a good crop.

2. Pine tags are used in considerable quantities in the growing of this crop in some of the Tidewater and Eastern Shore counties, and are said to help it. We presume the effect is more mechanical than manurial, as they have very little fertilizing value.

3. On heavy soil lime will be found of benefit in the growing of sweet potatoes, as it tends to make the soil lighter. From 20 to 25 bushels to the acre may be used, but should not be applied just before planting the crop. It should be put on the land in winter.

4. In our last issue we wrote very fully on the use of commercial fertilizers in the growing of corn and to this we refer the inquirer.

5. Numbers of our subscribers are reporting to us good results on the corn crop from lime applied to the land during the winter or early spring preceding the planting of the crop.—Ed....

CORN CULTURE.

I have seven acres of land that I wish to cultivate in corn and sow down in German clover at last working. One-half has been in clover for several years, other half sown down in Black peas in 1904 and eaten off by hogs. Both pieces well plowed with two-horse plow in March. I am now covering with barn yard manure to be cut in with disc harrow. Will it pay me to use some good standard fertilizer in addition to the benefit of the clover at the rate of three or four hundred pounds to the acre? And if so at what time would it be best to apply it? At the planting of the corn or at the first or second working? I am thinking of planting the corn four feet each way, two stalks to the hill. Do you think this plan advisable? If not I would be glad if you would advise some better way. *Sussex Co., Va.* A SUBSCRIBER.

We do not think that you will find it profitable to use any commercial fertilizer on land you are preparing for the corn crop. The barn yard manure you are applying will make a better crop of corn and Crimson clover than anything else you can use or apply. Whilst we should expect a crop planted four feet each way and left two stalks to the hill on land prepared as you are preparing this field to produce a good yield, we ourselves prefer to plant in rows three feet six inches apart and to leave the stalks two feet apart in the row. A single stalk usually makes a better plant than where two are left together to grapple with each other for the plant food in the soil.—Ed.

FARMING LANDS OF VIRGINIA—TAMWORTH HOGS.

I shall be pleased if you will tell me which is the best land for general farming. Also which is considered the

best land for trucking in Virginia. I notice an inquiry about Tamworth hogs. Farmers had better not go into them too heavy at first, if at all. Some people like them but the great majority don't, even in Canada. Their sides are too thin to make good bacon and they are very slow growers and the bacon is hard.

Fairfax Co., Va.

CHARLES G. JOHNSON.

The best land for general farming in Virginia is to be found in the Middle, Northern and Valley sections. The best land for trucking is to be found in the Eastern or Tidewater section.—Ed.

DUCKS.

Is it best to raise ducks on water? I have a good-sized pond that I could use, if best. What must I feed the young ducks? At what age is it best to sell them, and at what time of the year? E. M.

Roanoke Co., Va.

Ducks will thrive faster and be more quickly ready for market raised on the land with an abundance of fresh water for drinking only than if raised on a pond. Recent experiments have proved that it is profitable to feed a considerable quantity of animal food to young ducks whilst raising them. They should be ready for market to be profitable at eight weeks old and the earlier in the spring they are put on the market, the better price will be received for them.—Ed.

FEED FOR HENS.

I have been asked by a friend the amount of feed it would take for ten hens for one month or year roughly speaking. As I have never kept track on such a basis I would be glad if some of your subscribers would kindly enlighten me. Of course cost of feed would vary with locality. AN ENQUIRER.

Fairfax Co., Va.

If you will refer to page 112 of the February issue and page 197 of the March issue you will find rationed fed to 200 hens and pullets by an expert poultryman. This will give you the information you seek.—Ed.

STORING MANURE—HARD PAN.

1. How much is saved by storing barn manure in a pit instead of spreading it over the land as fast as made? 2. Must the hard pan underlying the soil through Henry county, Va., be broken before alfalfa will be a success? *Cuyahoga Co., O.* C. D. THAYER.

1. The best and most economical way to use barn yard manure is to apply it to the land as fast as made, then no loss is sustained by leaching. It is not always possible to get on the land with the manure as made, therefore storing it in a pit with an impervious bottom and sides will conserve the urine and thus materially enhance the value of the manure. All the manure from various kinds of animals should be mixed in the pit and the heap be kept well consolidated and moist, and very little of the plant food will be lost.

2. No land anywhere with a hard pan underlying the surface soil will ever make good and profitable crops till the hard pan is broken and the subsoil rendered pervious to moisture.—Ed.

IRISH POTATOES—IMPROVING SANDY LAND—SOY BEANS—HOG PASTURES.

1. Should Irish potatoes be planted on the flat or on a hill? Should they have dirt plowed to them?

2. I have bought a piece of sandy land that is very poor, please tell me the quickest and most effectual way of enriching it. Would it do any good to subsoil this land? It

is very loose, so much so that the plow will bury down in it almost to the beam. Can I grow clover and alfalfa on it to much advantage? Give your best idea about improving it.

3. This land has a few bunches of running briars in it. How can I get rid of them?

4. How is the best and quickest way to get out Soy beans?

5. How many hogs can be kept, in a growing condition, on seven acres of land, the land being laid off into three lots? What kind of crops to plant or sow in each lot to give food the year around? H. S. SWAIN.

Thyrell Co., N. C.

1. Irish potatoes in the South except for the early spring crop should be planted on level land and the cultivation be kept level. It is a good plan to open the furrows deep and plant the sets and then cover lightly not filling the furrows until the sets have sprouted and commenced to grow freely. Then in the work of cultivating the crop gradually work the soil into the furrows until the land is level and so keep it until the crop matures. This ensures a cooler soil for the tubers to grow in than if ridged and the Irish potato always does best in cool soil.

2. This light sandy land will need all the vegetable matter you can get into it to make it productive and likely to grow alfalfa or clover. Subsoiling is not necessary on land so loose as this. Lime would help to bind the land and make it more retentive of moisture and fertility. Apply 25 to 50 bushels to the acre. Sandy land is almost always deficient in available potash and phosphoric acid. Apply 300 pounds of acid phosphate and 50 pounds of muriate of potash to the acre and put into Cow peas and plow this crop down in September and follow with Crimson clover to be plowed down in spring, and then plant in corn and sow Cow peas or Crimson clover, or both, in the corn at the last working.

3. The only way to get out the briars is to cut off the tops and grub out the roots clean.

4. We understand this query to mean the best way to thresh out the peas. This can be done quickest by running them through a wheat thresher or separator, taking out part of the concaves and giving plenty of room for the coarse vines to pass through the machine. Run the machine slowly.

5. This is a question impossible to answer as it entirely depends on the productive capacity of the land. The best crops to sow for hog pastures are Crimson clover, wheat, oats and rye or Hairy Vetch, wheat, oats and rye sown in August or September for winter and early spring pasture. Canada peas and oats sowed in December or January for pasture in April and May. Sorghum and corn planted in April and May for June, July and August pasture. Cow peas and Soy beans planted in May, June or July for August and September pasture. Peanuts and sweet potatoes planted in May and June for October and November pasture. Artichokes planted in March or April make good winter feed, the hogs rooting them out for themselves. Rutabagas sown in June and turnips sowed in July, August and September will also largely help through the winter. Pumpkins planted in the corn field in May or June also make useful feed in the late fall. As the fall and winter feeding crops are used up the land should be planted in the other suggested crops to maintain a succession of feed and as these are consumed fall and winter crops should succeed them.—Ed.

PERMANENT PASTURE.

Do you believe in and advise permanent pasture? I have two fields both being handy to barn and water. There was corn on one two years ago followed by Crimson clover, it was pastured, is well set to Bermuda and the Crimson clover has also reseeded itself, insuring fair stand. The other is in better state of cultivation, almost free of wire grass, which had a good stand of clover plowed down and raised a fine crop of corn last year and is now well set to Crimson clover. Would it be advisable to pasture this field, which is in a better state of cultivation, and work the other, or pasture the other again and put this piece into Soy beans? SUBSCRIBER.

York Co., Va.

The question of a permanent pasture depends very much upon the section of country. On the light lands of Eastern Virginia no permanent pasture excepting Bermuda sod can be expected to be profitable, whilst in Piedmont and Southwest Virginia and the Valley permanent pasture of other grasses are maintained in profitable production for many years, if properly managed, actually increasing in feed and value every year. If you have a field well seeded with Bermuda and re-seeded with Crimson clover, we would not disturb it, but keep it as your permanent pasture. It will make a better one year by year. Put the other field, which is free from Bermuda into cultivation and grow Soy beans and Cow peas or some other forage crop for winter feed upon it.—Ed.

DEWBERRIES—CORN FERTILIZER.

1. When is the best time to fertilize dewberries that have just been planted out? What fertilizers are required to produce vines and when apply? What fertilizers are required to produce berries, and when apply?

2. Will nitrate of soda be beneficial to corn if used before it tassels? A SUBSCRIBER.

Warren Co., N. C.

1. A top dressing of 100 pounds to the acre of nitrate of soda will help your dewberries to make good growth during the summer. In the fall give them a top dressing of 300 pounds of acid phosphate and 50 pounds of muriate of potash to the acre and work this into the soil. Potash and phosphoric acid are mainly required in making seed and fruit. The nitrogenous fertilizers tend to increase growth of wood.

2. Nitrate of soda should be applied to corn just after it has commenced to grow freely, not be deferred until the corn is tasseling, when it will be too late for it to be of any use in the production of grain.—Ed.

CRIMSON CLOVER.

Can I get a stand of Crimson clover by sowing it in corn at last working? How much seed must I sow per acre? What should the seed cost me per pound? Can I get material for inoculating seed from Virginia Experiment Station? A READER.

Spotsylvania Co., Va.

Crimson clover often makes a good stand seeded in corn at the last working or in July or August. When seeded as late as August it has to be done without cultivation and does not always succeed unless the weather be showery so as to keep the land moist until the plants get good root hold. Sow 15 pounds of seed per acre. The price is usually about 10 cents per pound.

LIMING LIMESTONE LAND—ROTATION OF CROPS—CRIMSON CLOVER.

I have some 30 acres of rather up lying, gravelly land (white or grey) gravel. (Our Valley is a limestone valley with very fine limestone for lime burning.) I had this land

in corn in 1903. Made a very fine crop. The last working I seeded it to black peas and got, say a good half crop. Turned them under and last June I seeded the land to peas and millet and got a nice crop of roughness, and then turned under the stubble (did not mow it very low), and from the 1st to 10th October I rolled the land well and then seeded it to rye and Crimson clover and rolled it again. Also sowed Timothy heavily on it for a permanent sod and the rye and Crimson clover to mow this spring for a hay crop of roughness. The winter has been a severe one and I have the rye, but think my Crimson clover and Timothy all gone. Now, to the point. At what stage of the rye should I mow it for hay, and then could I not put the land in peas, or peas and millet again, and make another mowing crop for roughness, or would it run the land too strong? I need the crop of roughness for next winter's feeding and should the land be plowed, or would it do to disc it good and seed it? Now, again, would it pay me to lime this land, say 50 bushels slack lime to the acre, or how much per acre, and should it be scattered over the land and disc it in, and then how much fertilizer to the acre and what kind? Would expect to put the land this fall in rye or wheat in order to get a set of Timothy for mowing for hay.

I have been unlucky now two years sowing Crimson clover in the fall. Got fine stands but the winter freezing and thawing threw it out.

I seeded in my corn last year at last plowing rye and Crimson clover to turn under for corn this year, and have good stands. Would it also pay me to lime this land before turning it and how much per acre, and if I put rye and clover again this summer at last plowing of corn could I not corn it again next year and save plowing up my sod land for corn crop?

I can burn my lime and have ready for these crops if it will pay me to do so. N. D. BARNETT.

Roanoke Co., Va.

Your enquiry reached us too late to be answered in the April issue and was unfortunately overlooked when replying to enquiries in the May issue.

The rye should be cut for hay just when coming into ear. Possibly by this time you may have found out as numbers of others have done this spring that the Timothy was not all killed as you supposed and that it may yet make a crop. We have had several such cases reported to us this spring. If the Timothy really failed, you can put the land into peas and millet again and probably you will succeed quite as well with this crop by discing the land as by plowing it. We have known this done frequently.

Limestone land is very often quite as responsive to an application of lime as freestone land. We have published several accounts of success achieved by using lime on land of this character. We would, however, put the lime on in the fall or winter rather than in the spring, using from 25 to 50 bushels to the acre, spread broadcast after plowing and harrow in lightly before seeding the wheat or rye. Apply with the wheat 300 or 400 pounds to the acre of bone meal or a mixture of half bone meal and half acid phosphate.

We think your failure to secure a stand of Crimson clover is mainly caused by the fact that you seeded too late. Sow in August, so that the plant may get good root-hold before the winter and the frost will never hurt it.

Whilst a second corn crop following rye and clover might succeed, yet we do not advise such a system of farming as it only tends to reduce the fertility of the soil, whilst a proper rotation of crops will not only maintain fertility, but enhance it. Instead of putting corn on the land again, sow Cow peas or Cow peas and sorghum for a hay crop and then follow with Crimson clover or vetches for a winter cover and you will make a much better corn crop and keep up the fertility of your land.—Ed.

MAINTAINING FERTILITY OF UPLAND.

I want to cultivate my uplands in corn every other year. Can I do so and improve the land by cutting the corn for ensilage and then seed the land in German clover, and the following spring fallow the clover and seed to peas? I want to lime the land. What time shall I do so, and how much shall I use?

I have four acres seeded to rye, oats, wheat and German clover. Will the mixture make good hay? If so when must it be cut? After cutting I want to seed the land in peas, must I cut the peas or allow them to fall on the land?

Prince Edward Co., Va.

C. M. BASS.

We know of a number of persons who say that they can maintain the fertility of their land whilst growing corn every other year upon it with Crimson clover seeded as a winter cover and Cow peas for a summer crop. We, however, think it is very doubtful whether fertility can be maintained under such a system of cultivation without the assistance of some acid phosphate and potash and some lime. Both crops, clover and Cow peas, are large consumers of lime, phosphoric acid and potash as is also the corn crop, and whilst the two leguminous crops will keep the land supplied with nitrogen, they supply neither phosphoric acid nor potash, excepting so far as the Cow peas may bring up some of these minerals from the subsoil by their long roots. If 300 pounds of acid phosphate and 50 pounds of muriate of potash be applied per acre to produce the Cow pea crop and this be followed by 25 to 50 bushels of lime to the acre to produce Crimson clover and these crops be turned down or only grazed, then we have no doubt but that corn can be produced successfully and the fertility of the land be maintained.

A mixture of rye, oats, wheat and German clover makes an excellent hay crop. Cut when the clover is just coming into bloom.

If you wish to improve the land quickly, let the peas fall down and plow them under, but if the land is in a fairly good condition of fertility, we would take off this crop for hay, leave a long stubble and turn that down for the succeeding crop.—Ed.

PLANT FOR NAME.

1. I enclose plant that is spreading on my place and makes quite a luxuriant growth. I would like you to tell in Enquirers Column the name and whether it has any feeding value either as hay or pasturage.

2. I wish to sow this fall a piece of ground in oats and vetch that I intend to sow to alfalfa in 1906 and wish to inoculate with burr clover. How much must I sow per acre and will it help the hay crop or injure it next spring?

3. What time will burr clover ripen seed?

Chesterfield Co., Va.

W. S. IVEY.

The plant sent is wild vetch. It is of some value as a pasture, but it should have either Hairy or English vetch substituted for it, if intended to be grown as a forage crop, as a much larger yield per acre can be raised from either of these varieties than from wild vetch.

Burr clover should be seeded in July, August or September. It grows during the winter months, blooms and seeds early, and dies usually by June, after having shed its seed on the ground, where it will usually come again the following year, if the climate suits it. It has not yet been much grown in this State and, therefore, to some extent it is experimental and it remains to be seen how far it is going to be well adapted to our climatic conditions. Further South it is a complete success as a winter pasture and as a means of inoculating the soil for alfalfa. We would advise you not to rely upon it solely as a means of inoculating the piece of land you mention for the alfalfa

crop, but to send to the Experiment Station at Blacksburg for alfalfa bacteria to be used on the land when sowing the alfalfa. If the Burr clover succeeds, the soil will be so much the better inoculated for the alfalfa.—Ed.

FORAGE CROP.

I wish to know what you think of sowing peas in the corn when laid by, and sowing peas in thin places and galls and sowing some acid phosphate in the field where corn is planted so as to improve the land., would that not be better than cultivating such spots in corn? I would like to know what kind of grass is best to sow with peas for a hay crop? I was advised last season to sow sorghum but it grew too rank before it was time to cut the peas and was too hard to cure and when I sowed peas and crab grass come up in them the hay cured much better.

S. M. KENNEDY.

You will see by our article on Work for the Month in this issue how strongly we are in favor of sowing Cow peas in the corn at the last working. We also are of the opinion that it is more profitable to grow peas on thin land by giving it a dressing of 200 or 300 pounds of acid phosphate than to attempt to raise corn upon such land. The peas, however poor a growth they make, will help to improve the land, whilst the corn simply further depletes it of fertility.

Whilst we think Cow peas and sorghum make a most excellent hay crop, yet we know of a number of people, who prefer to sow millet rather than sorghum with the peas. Either make good hay.—Ed.

COW PEA GROWING FOR PEAS.

In the March issue of the Planter you give the census report of 1900 giving the acreage that was in Cow peas in 1899, and the average per acre for 12 Southern States, you say is too low. I have cultivated a few acres in Cow peas each year for the last 20 years or more and from 7 to 9 bushels per acre is about what I get. Might get a bushel or so more per acre if they were picked. I plant at any time from the last of May to the 15th of June, in rows two and a half feet wide with a planter set to drop 5 to 8 in a hill 18 inches apart. The planter is set to cover them one to two inches deep, at the same time to drop 200 pounds of 14 percent. phosphate per acre. Then we usually cultivate two or three times before the vines get too large, and if season suits our vines get about knee high and cover the land fairly well when in full growth. I have tried manuring the land very lightly. That will make too much vine growth but fewer peas.

Athens, Ga., Va.

W. A. MARSHALL.

In this issue of the Planter you will find a report giving the production of Cow pea seed by different varieties at one of the Southern Experiment Stations, from which you will see that more depends upon the variety grown than upon the condition of the land. Cow peas have shown themselves in these experiments to be peculiarly affected by local conditions. The best cannot be expected from any variety till it has become adapted to a particular section. We think if you would grow the New Era, planting in rows 2 feet 6 inches or 3 feet apart and dropping them about 6 or 8 inches apart in the rows, and cultivate the crop two or three times, giving when planting an application of 300 pounds of acid phosphate and 50 pounds of muriate of potash to the acre, that you will succeed in growing a much greater number of bushels of seed than you have hitherto done. It would seem that as a result of the experiments made at several places that all the luxuriant vine-producing Cow peas are shy in producing peas,

whilst those making but little vine usually make good yields of seed. We hear excellent reports of the New Era from those who have experimented with it.—Ed.

FERTILIZATION AND CULTIVATION OF THE CORN CROP—SWEET POTATO FERTILIZER.

1. I would like for you to tell me in your next issue if I can fertilize our corn after it is planted by sowing the fertilizer in between the rows and cultivate it in when I am plowing the corn.

2. Is it an absolute necessity to use the little one-horse plow to cultivate the corn? Our neighbors tell us that if we do not ridge the ground with the little plow our crop will be a failure. I do not like to work the corn with the little plow, and yet, I do not want the crop to be a failure.

3. How much and what per cent. guano should we use for sweet potatoes?

4. We have some land that was cultivated at one time but was let go back to reeds, since we have had the place we have tried to plow some of them but there are so many roots that we are unable to tend the land. What is the best and the quickest way to get rid of them?

5. I have a double row corn planter, would like to check the corn when I plant it. Will it pay or will I have to drill it? I want to try and save the expense that goes to pay labor for hoeing.

A SUBSCRIBER.

Norfolk Co., Va.

1. If you will refer to our article on Work for the Month in this issue you will see that we advise intercultural fertilization where the crop is not making such growth as it ought to do.

2. No. Work the crop with a five tooth cultivator like the Iron age or disc cultivator and never put a plow into the field after the crop is planted. Keep the field level all the time. See our article on cultivating the corn crop in our last issue.

3. A good fertilizer for sweet potatoes may be made by mixing 320 pounds of acid phosphate, 360 pounds of cotton seed meal and 150 pounds of muriate of potash applying this quantity per acre if the land is poor and decreasing the quantity to one-half if the land be in fair fertility.

4. The only way to get rid of the reeds is to drain the land and thus dry them out. They will not grow in well drained land. When the land is dry put in a heavy plow with plenty of horse power and tear up the soil deeply and then drag out the roots with a heavy drag harrow.

5. There is no reason whatever why you should not check your corn if you desire to do so. It will grow just as well and will enable you to cultivate both ways.—Ed.

VARIETY OF COW PEAS—PREVENTING HORNS GROWING.

Some years ago a neighbor of ours had a variety of corn field peas, about one-third larger than the black-eyed peas and pure white in color. Can you tell me the name? I have never seen any like them since, and the man is dead, so I do not know how to find out unless you can tell me.

Is there any way to prevent the horns growing out in young cattle?

FARMER'S WIFE.

Mecklenburg Co., Va.

We do not know a Cow pea that is perfectly white and larger than the Black-eyed variety. We think the peas you mention must have been one of the small varieties of Navy beans grown commonly in the North. These will grow quite well here.

The horns of calves can be prevented growing by rubbing the button from which the horn starts with caustic potash once or twice when the calves are two or three weeks old before the horns have started growth.—Ed.

Miscellaneous.

THE REPORT OF THE DEPARTMENT OF AGRICULTURE OF VIRGINIA.

Editor Southern Planter:

Referring to your criticism of the annual report of the Department of Agriculture of Virginia I do not claim that said report is above criticism, neither am I ready to admit that it merits being "thrown aside with a feeling of disgust," an opinion advanced by a correspondent of the *PLANTER* and endorsed by that journal with much seeming satisfaction. I have an idea that should the identity of said correspondent be disclosed the Board of Agriculture would be at no loss to account for his animosity. That the opinion as advanced above by the *PLANTER* and its correspondent is not the unanimous verdict of the agricultural public is evidenced by the fact that numerous intelligent farmers have commended the report to the writer, as have also the local papers of three counties of the Rappahannock Valley (all I have seen), and also the *Fredericksburg Free Lance*, the leading paper in this district. I would remind the *PLANTER* that these papers are published right down among the growing crops and do not breathe their agricultural inspiration through cobble stones and asphalt pavements.

The *PLANTER* claims that outside the inspecting and analyzing of fertilizer and sinking money on the Test Farm, "it is difficult to see what the Board or Commissioner has done." As a practical farmer and a large user of fertilizer I know if nothing else had been done than the work mentioned in fertilizers, the farmers of the State would have been repaid an hundred fold the cost of the Department. But is this all? Under the auspices of the Board of Agriculture Farmers Institutes have been held in many counties. The gospel of scientific agriculture is being preached throughout the State by such splendidly equipped lecturers as Professors Soule and Davidson, of the V. P. I., and others. Does the *PLANTER*, which poses as a teacher of scientific agriculture, count this as nothing?

Under the pure food law the examination of foods has been entered into and is now as much a feature of the work of the Department as is fertilizer inspection. Does the *PLANTER*, representing a clientele, consider guarding the purity of food for man and beast as of no benefit?

The Board in co-operation with the Virginia Polytechnic Institute is having a geological survey of the State made to comprise both mineral and soil classification and to chart water power capacities. Does the *PLANTER* regard this work as worthless?

Without any appropriation the Board is doing what it can in immigration work.

All of these things were adverted to in the report criticised, yet the *PLANTER* in a criticism which it

conceived to be its "duty to the agricultural interests of the State" failed to allude to them.

The *PLANTER* seems to find much satisfaction in the statement made by the president in his report, that the results at the test farm have been disappointing. The late president stands by that statement. The Board of Agriculture has nothing to conceal. So far as my information goes, there is not a test farm or experiment station in existence with a record of success from start to finish.

The *PLANTER* has done us the honor of comparing our work with that of the Experiment Station of the V. P. I. I have only unqualified praise for the Experiment Station at Blacksburg, as now conducted through the splendid ability of Professor Andrew M. Soule, but it is a fact known to all well informed persons, that up to the time the present distinguished president was installed, some nine years since that institution was a dead failure.

The *PLANTER* criticises the report for suggesting further appropriations. There are only two suggestions along this line, one for immigration, the other for enlarging pure food work. The intelligent editor of the *PLANTER* should know that the fertilizer fund is not available for either of these purposes. The Legislature appropriates only \$2,000 a year for pure food work and nothing for immigration purposes. It is perfectly proper and right that the Board should ask for money for these two objects, and I believe the taxpayers of the State will see to it that the next Legislature provides it. I will say, for the information of the *PLANTER*, that every word of printing for the Agricultural Department is paid for out of the funds of the Department.

The fact is his record will show that the editor of the *PLANTER* has been for years opposed to governmental aid to agriculture, either State or National. I have before me an address made by him before the Horticultural Society in 1902, in which he says on page 198 of the proceedings of this body, that the National Department at Washington, the State Board of Agriculture and the Experiment Stations do great injustice to the publishers of farmers' journals by sending out free publications to the farmers. In the same address, page 200, he expresses himself as opposed to the tonnage tax on fertilizers by which the State Department of Agriculture is supported, and inspection of fertilizer is carried on. Those of us who by hard work secured the passage of this law, well remember that we had the influence of the *PLANTER* to combat.

If the Department of Agriculture is guilty of the shortcomings the *PLANTER* charges it with, I think I can show the editor of that journal particeps criminus. The writer, when elected president of the Board two years since, wrote to the editor of the

PLANTER inviting him to suggest some line of policy beneficial to the agricultural interests of the State along which the Board might act. I have at this writing the reply of the editor before me in which he promises to do so when he had "a little more time." Hearing nothing from him, some three months later I called on him at his office, reminding him of his promise, and again inviting suggestions. He furnished none. Under this showing I think his recent criticisms are in very poor taste. The editor of the PLANTER did appear before the Board at its second meeting after the instalment of Commissioner Koiner with two suggestions. One was that the Board subsidize the subscription list of the PLANTER to the amount of \$500 for free distribution among farmers who did not subscribe to the PLANTER. (Yet he is opposed to Government and Experiment Station free distribution of literature.) The other suggestion was that the Board have its bulletins issued through the PLANTER. Neither of these suggestions appealed to the Board with sufficient force to secure their adoption.

I do not know that farmers look to an agricultural journal for instruction as to their political duties, if so such instruction would come with more force from one whose editor takes sufficient interest in our institutions to become a registered voter.

The Board of Agriculture would be much gratified to have the approval of the SOUTHERN PLANTER for its work. The ten farmers and the honored president of the V. P. I., who compose this Board, however, will continue conscientiously to perform the duties intrusted to them as they appeal to them looking to the intelligent farmers of the State for an appreciation of their work. J. H. C. BEVERLEY, Member of Board of Agriculture & Immigration for First District.

We willingly give space for the publication of the foregoing defence of the report of the State Board of Agriculture and the work of the Board by the ex-president of the Board, from the criticism which we felt it our duty to make. We, however, have one regret in connection with the defence, and that is that the writer should have descended to personalities and politics. We have always carefully avoided these objectionable features. Their injection into the controversy reminds us forcibly of the lawyer with the bad case, who endeavoured to help himself out of his difficulty by abusing the complainant's attorney. What we may have said or done at some time in the past has no bearing on the subject under discussion. The question is solely one as to whether the report of the Board, through its President and Executive Officer, is such an one as the people of Virginia has the right to require and as the law contemplated should be made. We and our correspondents main-

tain that it is not, and even the ex-president does not seem to be very certain it is. Referring to the remark that if the name of our correspondent from whom we quoted last month should be disclosed the Board would not have difficulty in accounting for his animosity, we would say that although we have no authority to disclose the identity of the writer, yet that if we had or he himself chose to disclose it, the Board would find that he is a gentleman who, while preeminently qualified to offer an opinion on the subject under discussion, has never had any controversy with the Board or any personal animosity to it or its members, or ever sought or ever will seek any favor at its hands. He is a citizen of the State, a member of one of the oldest families in it, and one who by virtue of his great possessions is vitally concerned in the prosperity of the agricultural interests of the State, but who has never sought political office or notoriety. Whilst we are much averse to introducing ourselves personally into the controversy yet as the ex-president has done so we feel bound to say a word. We have no regrets to express and no words or opinions to recall in connection with the matters concerning us personally which are commented upon. As to the covert sneer as to our receiving our farming inspirations on cobble stones and asphalt pavements we would say that unless we sadly misjudge the age of the ex-president we were engaged in practical work on the farm and in studying the scientific questions involved in agriculture before he was born, and so continued for probably as many years as he has farmed any land before we thought that possibly we might be qualified to help others by giving them the benefit of our practical experience and scientific training. It is true that we appeared before the Board and asked it to renew a contract made by the previous Board for the supplying to the Board a certain number of copies of each monthly issue of the PLANTER, these to be mailed by us to such addresses as the Board might supply, and the contract to carry with it as before the right for the Board to have the use of three or four pages of each issue of the PLANTER for the publication of reports of the meetings of the Board and of such matter as the Board or Commissioner desired to bring to the notice of the farmers of the State. The price at which we offered to supply these copies was practically less than the cost price of the same and would have resulted in no profit or gain to us. The previous Board appreciated the importance of the aid we could give them in bringing the work of the Board before the farmers and the help to the State which would result from being able to send the agricultural journal of the

State to enquirers for lands in the North and West, and hence gladly made the original contract. Under its terms hundreds of copies of the *PLANTER* were sent to the West and Northwest to enquirers and we know that these resulted in bringing many settlers into the State, as from that time many of them became subscribers to the journal and are now on our list in this State. The quarterly meetings of the Board were fully reported from the minutes, and farmers throughout the State were kept in touch with what the Board was doing and the views of their members and other information was brought to their notice without further cost to the Board for printing or postage. We have no quarrel with the present Board for not renewing this contract. They evidently prefer to keep their doings secret and to leave the enquirers as to the State in ignorance of our advantages except in so far as a personal reply might give this when time permitted. The non-renewal of the contract saved us money and precluded us from helping to popularize the work of the Board. Upon the point of our hostility to the fertilizer laws. We admit the charge and reiterate it. We have never seen any reason whatever why the farmers of the State should be taxed to raise money to run the Department of Agriculture and to inspect fertilizers in excess of the tax imposed on other citizens of the State. When the State decided that fertilizers should be inspected and that a Department of Agriculture should be created this was done in the interest of the State and not of the farmers alone, and the cost should be paid for out of the general taxes and not out of a tax imposed on fertilizers, every cent of which is paid by the farmers alone. The cost of the inspection of feeding stuffs under the pure food law is not paid for by the dealers or makers of these articles but by the people of the State. The same rule should be applied to fertilizers. Whilst the ex-president is confident that the farmers of the State get value received for this tax we have always doubted it. Much the greater part of the money goes for inspection and sampling. At the best but a very infinitesimal part of the fertilizers sold can be inspected, sampled and analyzed. The great bulk is sold and bought on the guaranteed analysis of the makers. It is right to require this and this with the liability to damages in case of fraudulent guarantee should and in our opinion would be sufficient to protect the buyer's and thus save a very large item of expense. That the result of the enactment of the law has been enhancement of the quality of the fertilizers sold is not borne out by the chemists' last report. He shows that the number of brands falling below guarantee has increased over last season.

And now one word as to our remarks before the Horticultural meeting as to agricultural publication being disseminated free by National and State Departments. We stand by every word we uttered. We were careful to say that we did not include in our condemnation official reports or the reports on scientific questions under examination by experts. What we condemned and objected to was the wholesale distribution of such agricultural literature as is to be found in every well edited and conducted agricultural journal. We objected to this on the same ground as we object to the distribution of free seeds by the National Department of Agriculture. Private enterprise will ensure the supply of both seeds and literature of this class and it is not right that those who invest their money in either the seed trade or the agricultural publication business should be put into competition with National and State Governments. Farmers are quick to object to National or State Governments going into competition with them in supplying products of the farm and we have never believed that farmers desired either free seeds or free literature. The parties interested in the distribution of these free gifts are Congressmen and Senators in the National Government and State officers in State Governments. They enable these gentlemen to compliment (we will not say bribe) their constituents without having to put their hands into their own pockets. They get the benefit whilst the public pays the price. Both National and State Governments are guilty of sending out free, millions of copies of matter which agricultural publishers have to pay for and which have no better claim to be given away at National and State cost than the common news of the day. The so-called report of the State Board of Agriculture is an example in point. Out of 196 pages which makes up the book only 36 are the work of the officers of the Board, of which two are the report of the Commission, two the report of the President and 28 the report of the manager of the Test Farm. The remaining 160 pages are filled with matter taken from agricultural journals or contributed by regular correspondents of the agricultural press. To distribute such matter wholesale amongst the farmers of the State free of cost is competition of the most unfair character to agricultural publishers. The manner of distribution of this report is also an illustration of what we have asserted as to the persons promoting such free distribution. The report purports to be that of the State Department of Agriculture but it is sent out with the "Compliments of the Commissioner of Agriculture," and not of the Board. The Board is not elected by the people, but the Commissioner is.—
Ed.

VIRGINIA AND HER NEEDS.

Editor Southern Planter:

Virginia wants all the outside capital she can get to develop her various resources; she wants all of the honest home-seekers she can get to buy her surplus lands; she wants all the good industrious laborers she can get to work in her fields, mines and factories. These are her three great needs and the operation of her Agricultural Department ought to be directed to the accomplishment of these things. I note with interest the appropriate remarks you made, Mr. Editor, in the last issue of the *PLANTER* about the report of the Virginia Department of Agriculture for 1904. The report as a whole does not come up to the requirements of the case. What was the Department of Agriculture established for? Clearly to advance the agricultural interests of the State. How best to do this is the live question that confronts the State Board of Agriculture. It strikes me the best thing to do would be to publish, yearly, the proceedings of the Board of Agriculture and Immigration along with the reports of its officers by itself. In addition and under separate cover let the Board of Agriculture, with the aid of its executive officer, publish a hand-book of the resources of the State, including land values, water power, forestry, farm productions, climate, etc., say *every three years*; not only have a good number printed in the English language but also in German, Russian and Italian. If the Board of Agriculture has not the power, let the next Legislature give the right to establish a branch office in the city of London, England, from which the hand-books can be distributed to all applicants from foreign countries. The Assistant Commissioner in London should have interpreters who could speak and write the languages named above; let notice be given through the leading newspapers of Europe that the Virginia office in London will give all desired information about this State; under this plan I think in a few years we will have a stream of land buyers and laborers coming to us from other countries to whom we can sell our surplus lands and settle for many years the question of farm labor.

But it will take money to accomplish all this. The President of the Board of Agriculture and Immigration tells us they only asked the Legislature for an appropriation of \$5,000 but none was granted.

As you say, Mr. Editor, let the farmers hold meetings and demand the help of their representatives beforehand. When elected they will see then that a reasonable amount be given the Department of Agriculture for immigration purposes.

I beg leave to call attention to the forcible lan-

guage of President Beverley in his report to the Governor: "There is no question more vital to the agricultural interests of Virginia than that of immigration. The most serious drawback to agricultural advancement in the State at this time is scarceness of efficient labor. I see no relief for this, except in securing desirable immigrants both as settlers, with means to buy lands, and as wage earners. I believe if our natural advantages and resources, cheap lands, mild climate, nearness to market, etc., were properly advertised, these home-seekers would come among us in large numbers."

The Test Farm has been a lamentable failure and unless the Board can and do make a change of methods the Legislature had better cut off the appropriation. The proper thing to do is for the State to pay the county of Charlotte for the farm, and then put it up at auction and sell to the highest bidder. As far as I can learn it is totally unsuited in soil and location for the purpose of a Test Farm for tobacco. The finances of the Agricultural Department are now in much better shape, and it has quite a good balance to its credit, but notwithstanding this amount there is no reason why the next Legislature should not make an appropriation of \$20,000 for immigration purposes. The railroads and Real Estate Association in this State ought to be asked to contribute to the maintenance of the branch office in London. Mr. Beverley says the railroads are willing to pull with the Board, so why not the real estate men. Let the Real Estate Association respond through the columns of the *PANTER*, if you can give the space, Mr. Editor.

E. W. ARMISTEAD.

We commend the above to the attention of our Virginia readers and ask their action in the line suggested. In our opinion the proper course to take would be to ask the Legislature to resume the collection of the fertilizer tax and for the same to be covered into the State treasury and then for the Legislature to appropriate specifically the sums to be spent by the State Board for the general work of the Board, for immigration and for Test Farm work. It is always an unwise and injudicious course for a Legislature to allow any other than the proper collecting and disbursing officers of the State to have any right to collect or disburse the moneys raised by taxation. Such a course inevitably results sooner or later in extravagance and misappropriation. Let there be specific appropriation by the Legislature for each department of work and then hold the Board to strict accountability for the proper disbursement of the appropriation in accordance with the terms of the appropriation.—Ed.

THE LABOR DIFFICULTY IN THE SOUTH.

Editor Southern Planter:

More is heard about the scarcity of labor every day, and it seems indeed to be a serious situation confronting very many farmers in the tobacco belt of Virginia, and doubtless the same is true of other sections of the South, where negro labor is the main dependence. It has been suggested from some quarters that higher wages and better provision and treatment would solve the problem, thus securing the desired help. But do the present prices of tobacco and cotton justify farmers in contracting to pay a large scale of wages? Moreover, considering the capacity and general utility of the negro laborers remaining for hire in the rural districts to-day, are they really worth any more than has been and is now paid them to work on the farms? My own experience with this freed race as farm hands, especially the younger generation, is that most of them are shiftless, inefficient, irresponsible. And this recalls to memory a little story I once heard of a distinguished American who while traveling through the Southern States once saw a negro, hoe in hand, sitting under a tree at the edge of a corn field that was badly overrun with weeds. The hired man, in reply to a question as to what he was doing, said he was "out dar ter ho dat cohn." "Then what are you doing under that tree? Resting?" persisted the questioner. "No, sah, I'se not restin'," was the answer. "I'se not tired; I'se jest waitin' fer de sun ter go down, sah, so's I kin quit wurk."

Again, now-adays there seems to be a great tendency toward "cropping" and working on shares. If land owner must furnish supplies he incurs every chance of loss in the long run. And, by the way, it is this tenant system that is running down so many farms in the South to-day. In whatever light, then, the situation is viewed it is a serious one as regards the labor question.

Now, in my opinion, there is but one practical way of escape or relief from the pending labor trouble in the South, and that is intensive farming—more grass and live stock, and less tobacco and cotton. The scarcity of labor compels a reduction in acreage. Hence the necessity of making that acreage more fertile. May we not begin now, although late, and make an acre rich, or for that matter as many as we can, and then prepare and plant that land to corn, give a clean, level cultivation, and note the wonderful growth and splendid final results. Fifty barrels of corn (250 bushels) have been produced on one acre, and it is said that that acre was originally very poor land. Now, while I am one who believes that what

has been done can be done again, for my part I must confess that I would be quite satisfied to possess just a few acres that would produce even half the above record-breaking yield. For then with me, at least, the labor question would be practically solved.

JORDAN B. WELLS.

Mecklenburg Co., Va.

THE ENGLISH SPARROW.

Editor Southern Planter:

Will you allow me in your valuable columns to break a lance in defense of that Ishmaelite of bird-dom, the English sparrow. Now, I am a firm friend of all birds and I think even the devil should have his due, and really the English sparrow has improved so much since he became a naturalized American that I am of the opinion that he should no longer be an outlaw.

1. He has learned to be a great worm eater. In my garden a flock always follows me and picks up every worm and bug uncovered by my garden plow, and I never hesitate to leave my corn, etc., laying open and uncovered until convenient to cover it, and never a grain have I seen them carry off. After cutting off my vetch crop I have found hundreds of cut worms under the cocks of new hay and on these my sparrows always feast. They seem to know by instinct that the worms are there and are ready for them when I turn over the cocks. I have seen one female gather up 10 to 15 worms before flying away to her young. Now imagine how many corn stalks a flock of sparrows would save me, from having cut down, by their day's work among the worms. I notice, too, that they have learnt from their American chipping sparrow cousin to go under the plants and search upward for the small green worms which feed almost entirely on the under surface of cabbage leaves.

2. As to their running off other birds, I believe the disappearance of other birds is due to other causes rather than to the quarrelsome sparrow, as for example the small boy, for on my four acre yard and garden I have hundreds of English sparrows, but I have also seen nesting this year one or more pairs of blue birds, scarlet tanagers, catbirds, viros, jays, thrashers, swamp robins, robins, mocking birds, Tovee's, wrens, crested fly catchers, orioles and chipping sparrows, and only one pair of nuthatches were interfered with so by a noisy pair of sparrows that they pulled up stakes and left after building their nest. For several years I have had to shoot a pair of sparrows, who would persist in trying to pre-

empt a hole in the boxing of my kitchen which I had for 10 years or more considered the home of a pair of crested fly catchers. I live in the middle of a town of 5,000 inhabitants and until eight years ago made no attempt to keep the boys from robbing nests in my large grove of oaks and fruit trees, but since that time I have been very strict in protecting the birds' nest and the result has been a little short of marvellous. Two next-door neighbors, one on each side, join me in the work and I think every bird hatched on our places comes back to build the following years.

To close, I know the sparrow is a noisy, dirty little bully and that he will head out wheat, oats and miller in a way that astonishes and disgusts the planter, but still I think he is now learning to do a great deal of execution among insect pests, which I know many observers, as for instance, the late Geo. W. Childs vigorously refused to believe, insisting that he was a strict grain eater and an unmitigated nuisance. I want to say that further study may prove that his good deeds may after all balance his bad ones.

Before I close permit me to say a word in defense of the bacterial theory as a cause of pear blight. To my mind the fact of a sudden invasion of the orchard by blight is in favor of this theory. It is hard for any mortal mind to take in the rapidity of bacterial growth. To-day a dozen microbes, to-morrow countless millions, as for instance in the plague epidemics, hundreds of men perfectly well one hour or day, dying or dead the next. All microbic diseases are supposed to have a period after the poison is absorbed during which the microbes incubate and then a more or less sudden invasion follows.

My plum, pear and peach trees are fuller of fruit this year than I ever knew them to be and indications point to a large crop here. Grapes were badly hurt by the late April frosts as they had just blossomed out.

DR. L. E. NORFEET.

Edgecombe Co., N. C.

THE COTTON CROP.

Editor Southern Planter:

I think the Doctor from Brunswick is right as to the best means to secure better prices for cotton, probably 8 cents would be the best price to demand. I heard an old cotton raiser from Middle Georgia say that if planters could only get 8 cents they would be happy and grow rich. This was when cotton was 3 cents, during the hard times of Cleveland's last administration, when everything was so low and yet there was no money to buy with. As long as present

conditions continue there always will be large crops of cotton made. Cotton is the laboring man's capital in the cotton belt. All rents are paid in cotton. When a farmer wants credit the first question is how many acres will you plant in cotton, and unless he plants a large crop his credit is very limited, almost everything there is on the credit system, so you see why they are compelled to plant cotton to the exclusion of corn and other crops. They buy bread and meat all of which is paid for with cotton. I lived three years in Middle Georgia, and being a farmer I was a very interested observer of the conditions which prevail there. Cotton being so easy to keep, let it be stored away and held at a reasonable price and not sold for any less, and cotton spinners will be obliged to meet it. If the planter needs it he can get money advanced on his crop.

I hope soon to see the time when farmers can price their own crops.

THOS. A. ORGAIN.

Mecklenburg Co., Va.

ODORLESS BASIC SLAG PHOSPHATE.

Editor Southern Planter:

In reply to your inquiry, beg leave to say that we have made arrangements for a limited supply of Odorless Basic Slag Phosphate, for the wheat crop of 1905-'06, and can deliver it about July 1st.

Basic slag is used extensively in England where intensive farming is practiced. This slag will analyze 16 per cent. phosphoric acid, and has this advantage over other phosphates; the phosphoric acid is not soluble in water but is soluble in the humic acid of the young rootlets of the plants, and the slag being heavier than the soil is not washed away by heavy rains, nor does the phosphoric acid leach beyond the reach of the plant, but remains until entirely absorbed by the plant as needed.

Extensive experiments indicate that where liberally applied on grass lands basic slag acts from three to five years without diminution of crops. Where used in connection with potash and nitrate of soda, basic slag makes an excellent wheat and other grain fertilizer, not only increasing the wheat yield, but leaving the land in excellent condition for a succeeding grass or other crop.

Our formula for wheat grower with basic slag, potash and nitrate of soda, is made from experiments extending over a period of five or six years, and was found to be the best formula for that purpose.

Reports from sample orders of our wheat grower indicate that it has given universal satisfaction.

Richmond, Va.

A. S. LEE & SON.

THE Southern Planter

PUBLISHED BY
THE SOUTHERN PLANTER PUBLISHING CO.,
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.

B. MORGAN SHEPHERD,
Business Manager.

TERMS FOR ADVERTISING.
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

Address THE SOUTHERN PLANTER,
RICHMOND, VA.

Entered at the Post-office, Richmond, Va., as second-class matter.

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PUBLISHER'S NOTES.

To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month.

WITH THE ADVERTISERS.

We invite attention to the new advertisement of Rosemont Farm in this issue.

Parties desiring a good farm and a comfortable home might do well to correspond with W. B. Payne, who has an advertisement in another column.

J. M. Hughes, a reliable trucker of Claremont, Va., is advertising Claremont Peach-Blow potatoes in this issue.

The advertisement of J. E. Thomasson will doubtless interest bee-keepers. Look it up and write him your needs.

Some finely bred Poland China pigs advertised in this issue by J. D. Stodghill. His offering also includes fox hound and fox terrier puppies.

The Richmond Cedar Works is offering its Majestic Rotary Washer. This machine is sure to appeal to all housewives.

W. T. Thrasher is offering bargains in Shorthorns. Look up his ad.

H. A. S. Hamilton & Sons start the season's advertising with this issue. Good stock here.

Guernsey Cattle of fine breeding can be had of G. M. Wallace.

The Chicago House Wrecking Co. has a couple of advertisements in this number, to which we invite attention.

The Empire Manufacturing Co. is offering Low-Down wagons and steel wheels in this number.

Several good hay presses are offered our readers by reliable advertisers in this issue.

The Norfolk Creosoting Co. has an ad in another column, which is sure to interest scores of our readers.

The Merit Rose Co. is offering well grown and rooted plants of the best known varieties at reasonable prices. Send for catalogue.

We invite attention to the advertisement of the Castalia Herefords, to be found on the cover.

The International Stock Food Co. has a very interesting announcement in this issue. Look it up.

Lloyd R. Peery is offering a gasoline engine which has numerous points of merit which are sure to appeal to the farmer.

Mention THE SOUTHERN PLANTER in writing.

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IN COLD STORAGE

For Late Planting.

Planted in June and July, these yield large crops of fine potatoes ready for digging just before cold weather comes on, carrying through the winter in first-class condition for either home use or market. By our methods of carrying these Late Seed Potatoes in cold storage, we are enabled to supply them unsprouted and in first-class, sound condition, just when they are required for late planting.

Book your orders early so as to get the kind you want, but don't order shipment until you are ready to plant, as the potatoes commence to sprout very soon after being taken out of cold storage. Prices quoted on request.

We are headquarters for **Cow Peas, Soy Beans, Millet Seed, Sorghums, etc.** Seasonable Price-list telling all about seeds for summer planting, mailed on request.

T. W. Wood & Sons, Seedsmen,
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AGENTS FINE SAMPLE SENT ANYWHERE
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\$1.50



QUICK GAS FIRE FROM KEROSENE OIL



Our Oil-Gas Fuel Burner converts your Coal Range or Wood Cook Stove into a Gas Range without any alteration. Guaranteed Absolutely Safe and will get out of order for years. Burns cleanly in C. coal, heats your oven perfectly, cooking or boiling, and is the most convenient. **PRICE \$3.00.**

Full particulars will be sent. Write for circular. Agents wanted. OIL-GAS F. B. Co., Dept. 3, Baltimore, Md.

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A strong windlass weighing only three pounds. Prevents corn shocks from falling or being blown down. Prevents shocks getting wet inside when it rains. Saves labor of two men. A great help in stacking wheat, oats, etc. Best endorsed farming implement in the United States. Sent, express prepaid, for \$1.75. Write for circular. Agents wanted. THE FONTAINE CO., Christie, Va.

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CAPITAL AND PROFITS, - - - \$1,134,938.14.

Special attention paid to out-of-town accounts. Correspondence invited.

Three per cent. interest allowed in Savings Department,
Compounded semi-annually.

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ROTARY WASHER
A Household Necessity.

BECAUSE:
It is the best WASHER on earth.
It's Ball-bearing, and almost runs itself.
It is made of white cedar, with electrically welded hoops sunk in the wood.
We are the largest manufacturers of woodenware in the World, and can make the **BEST; CHEAPEST.**

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Richmond, Va.

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Our Spray Calendar gives concise information regarding dusters and materials. Mailed on request.

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and other INSECTS killed by
GOOD'S

Caustic Potash Whale-Oil Soap No. 3

Endorsed by U. S. Dept. of Agri. and State Experiment Stations. This soap is a fertilizer as well as an insecticide. 60 lb. keg, \$2.50; 10 lb. keg, \$4.00; half barrel, \$7.00. 45¢ per lb. barrel, \$2.15. Send for Booklet!
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Envelopes	100.	500.	1,000.
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Bill Heads	350.	1.10	1.75
Cards	350.	1.10	1.75
Send cash with order.	350.	1.10	1.75

STAR PRINTING CO., Millboro Springs, Va.

FARMING IN PIEDMONT VIRGINIA

Editor Southern Planter:

The Eighth Congressional District embraces some of the most important counties in the State. This region is known far and wide as the Piedmont section, and has long been famed for its agricultural activities and the beauty of the landscape. Throughout the section are found almost ideal conditions from the standpoint of the farmer. The climate is admirably tempered, the soil is kindly and responds to generous treatment, while the country is gently undulating and well watered. Railroad facilities are excellent, churches and schools numerous, and there are encouraging evidences of progress on every hand. It was a real pleasure to visit this section of the State and meet personally with the farmers, who are making steady progress in solving the problems which confront them. Of course, there are deficiencies in practice here as elsewhere, and the soil has not always been treated as it deserves, but the leaders are thinking, industrious men who have seen the handwriting on the wall, and are changing front to meet increasing competition and the steady encroachment of scientific methods as applied to crop and animal production.

That this famous region should be regarded in the light of a wornout section, as is sometimes suggested, is incomprehensible to the writer, and must have found origin in the minds of persons unacquainted with the true nature of the soil and its possibilities under good management. As great a variety of crops can be produced in Piedmont Virginia as are grown anywhere in the State. All the soil building crops of the leguminous family do well; the soil is deep and holds tendentially all forms of plant food applied to it. Indifference sometimes to the value of grass as a restorative crop on the soil and a failure to alternate soil building with exhaustive crops has left the land in bad mechanical condition in some instances, but these are only temporary difficulties, which can be overcome in the course of a few years through the generous use of green manures, or, better still, an application of that obtained from the farm-yard through the increased production of beef and dairy cattle. The character of the soil constitutes the basis of agricultural wealth, and if it is naturally strong and capable of retaining the needed elements of plant food which may be applied in an artificial form, and if it is already possessed of large quantities of food which may be rendered available through judicious cultivation, the outlook for the farmer possessed of such land is indeed encouraging. If he does not make the most of his opportunities it is clearly his own fault, for nature under these conditions has done her part, and the soil but awaits the touch of the master hand acquainted as it must be with all those truths relating to physics, bacteriology, botany and the kindred sciences that have to do



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THE STRONGEST, MOST POWERFUL, SWIFTEST AND LIGHTEST OPERATING HAND PRESS EVER PUT ON THE MARKET.

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The best cutter on the market for green or dry corn. It cuts the entire ear into a fine chop. It does not cut but crushes the corn, rendering it more palatable. It is a great saving to the farmer. It is a great saving to the farmer. It is a great saving to the farmer.

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Machine Boxed Wheels—must be true. Machine Fit Skins—better than can be done by hand.

Have Extension Shoe Skin which fully protects axle—used only on THE "BROWN" WAGONS. Branch Chains to tongue chains—can't whip horse's legs.

Besides all this is stamped "BROWN," which is a guarantee of excellence and superiority. All about styles and sizes in free circulars.

BROWN MFG. CO., ZANESVILLE, OHIO.

with the mysterious growth and reproduction of crops. Then will the desolate places become glad and the whole face of nature become a veritable garden of the gods.

These are not the idle thoughts of a dreamer, though too frequently those possessed of the soil see nothing to encourage them, and thus become sad and pessimistic, whereas if they enjoyed the true insight into the possibilities of agricultural production, which education along agricultural lines would give, all would be changed for progress hinges largely on optimism and on the power of the seer to penetrate the future and from the tangled mass of facts which science reveals select those principles for guidance which, held to with tenacity, lead ultimately to fortune. Intelligent effort seldom goes to waste. Would that this great principle might become a fundamental truth in the mind of every farmer, and the greatest difficulty in clearing away the debris arising from centuries of wasteful methods and establishing agricultural practice on a new and higher plane would be overcome.

The occasion for these reflections was furnished by an Institute trip through the Eighth Congressional District in company with the Hon. Wm. H. Eggborn, member of the State Board of Agriculture for this district, under whose direction the meetings were held. The trip was interesting from start to finish, and was made exceedingly pleasant to the party by reason of the many courtesies received from Mr. Eggborn and the farmers of the Eighth District. The weather was ideal—in fact, too good for Farmers' Institutes because the dry weather of last autumn had kept farm work back very seriously, and there was a proper desire in the heart of every man to be afield and plowing. Nevertheless, the meetings were well attended, surprisingly well under the conditions, and those who did come brought enthusiasm for themselves and some to spare for their neighbors. The writer and his associates, Professors Davidson and Ferneyhough have seldom been more severely tested than by the audiences met on this trip, for questions were addressed thick and fast to the speakers, and they showed clearly that the farmers were thinking, and thinking seriously, over the many problems that come up for solution under the present complex system of agricultural practice, which competition and changed economic conditions have brought about.

No single interest claims the attention of the farmers in Piedmont Virginia. In this section of the State dairying has been more successfully developed than elsewhere, owing to the proximity of the cities of Washington and Baltimore, there is a steady and increasing demand for milk, cream and butter at good prices. The prices are not always just, for unfortunately the farmers in this part of the State have not yet learned the

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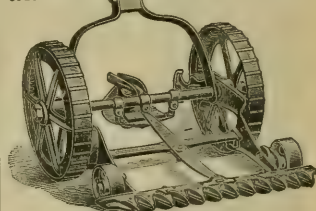
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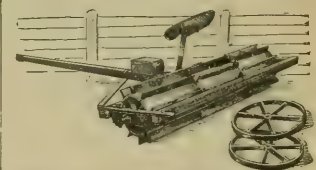
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The DRY WEATHER MACHINE. Does all its name implies, and more. Fills a long-felt need of the farmer and truck gardener wherever the earth is cultivated, whatever the crop or character of soil. No longer an experiment—universally endorsed wherever introduced. Open to proposals for its manufacture, and to purchase of State rights. Further information free. JOHN E. GOODMAN, Mt. Uila, N. C.

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Makes fine and spreads evenly. Everything controlled from seat; start beater or feed, or both, change to thick or thin spreading, without stopping. The

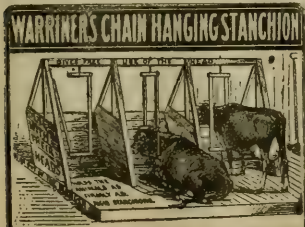
Only Low Down Spreader.

Just right for use in cow barns and for driving under low sheds—easy to load. Right width to straddle corn rows. No waste or scattering in yard or on road, no freezing manure on box. Solid bottom, scraped clean every load. Automatic drag return. Double wheel drive, safety and strength to stand the rough driving and the operating of machine.

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Will drill faster and deeper with one horse power than any other machine in the world! Just the machine for the South. Thousands of them needed to obtain pure water. Write for Southern references and particulars.

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Tiffin, Ohio.



value of co-operation, and so have not combined to protect their interests as they should. The market for dairy products is all that could be desired, and when the producers get together their profits will be vastly increased thereby without placing any additional burden on the consumer.

Piedmont Virginia also handles and fattens a large number of beef cattle. Grazing is not developed to the same extent in this section of the State as in the Southwest, because blue grass does not always take so kindly to the soil, and somehow or other it is more or less true everywhere that farmers who cannot get blue grass often conclude that other grasses cannot be grown to advantage, and the virtues of orchard grass and tall oat grass for grazing purposes seem to have been largely overlooked. It was natural under these conditions that the silo and crops for the same should prove to be a subject of general interest, for the silo will add vastly to the carrying capacity of Piedmont lands, and provide succulent and nutritious crops to take the place of grass both summer and winter. The silo will be invaluable to the dairymen of this section, as it provides an easy and cheap method of substituting a desirable food for the more expensive method of soiling, which is now too generally practiced.

The question of securing concentrates in a desirable form at the lowest cost was keenly discussed, and it is a pleasure to know that the feeding value of cotton seed meal is probably more generally recognized here than elsewhere. Its use, however, is far from general, and can be extended to advantage in the future. It was also pointed out that many leguminous crops which provide hay of superior quality can be grown to advantage and utilized for the grazing of hogs or as adjuncts in feeding beef and dairy cattle, and effect a considerable saving in the more expensive concentrates which are now purchased and utilized for that purpose.

It seems from various statements made that the soils of this region need treatment with lime, say at the rate of 25 to 50 bushels per acre once in three to five years. The unslaked lime should be purchased and utilized for this purpose as far as possible. Phosphates and potash are undoubtedly needed, as well as plentiful supplies of vegetable matter and nitrogen, which, however, should be obtained through an extension of the live stock interests or through the utilization of leguminous crops. Deeper, more thorough and persistent cultivation of the soil will bring its just reward.

All these problems are receiving their quota of attention, and with the encouraging forces now at work through Farmers' Institutes, through the efforts of the State Experiment Station, and through the dissemination of useful literature in the form of bulletins and agricultural papers, the future of this section is certainly encouraging.

ANDREW M. SOULE.

MASTERS Rapid Plant Setter

SETS

Tomatoes
Cabbage
Tobacco

Sweet Potatoes, Etc.

Does better work than can be done by hand, and twice as fast.

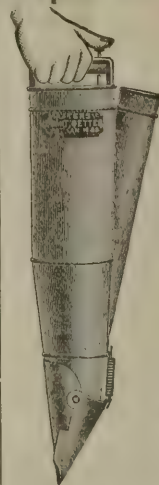
TWO BARRELS of water per acre with this setter will produce

SURE WORK
AND

BEST RESULTS

Price, \$3.75 each. Express charges prepaid to your station. Write for particulars, testimonials, wholesale prices etc.

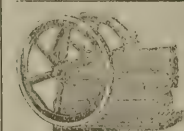
MASTERS
PLANTER CO.,
Chicago, Ill.



BUY DIRECT

and save dealers profits. Vertical, Horizontal, and Portable Gasoline Engines. Pumping outfits a specialty. Our Engines are guaranteed to do

all we claim for them or your money refunded. Write to-day. BARTHO BROS., 30-36 Fisher St., Springfield, Ohio.



Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 3 horse power, \$100; 5 H. P. double cylinder, \$200.

SOUTHERN MACHINE MANUFACTURING CO.,
731 E. Cary Street, Richmond, Va.

ENGINES: 13 Horse Tractor \$250; 10 Horse Tractor \$200; Rollers, Buckets, New and second hand from 4 to 100 Horse. Single saw mill \$125; Double mill \$150; Machinery of every description at one-third actual value.

D. CASEY, Springfield, Ohio.

ARTESIAN WELL Contractors.

DEEP WELL DRILLING a specialty. Estimates made free of charge in all localities. If you want any work done write M. S. SCHAILL, Michaux, Va.

Water Problem Solved

Machine for domestic well making. Cheapest by half. Most practical of any. Catalogue free. KOGER & SONS, Mooresburg, Tenn.

A Perfect Machine

The Reid Hand Separator is built along the lines of honesty, simplicity and effectiveness. No standing on the fence to get one that is your honest opinion of it. It is a time-saver, a money-saver, and the best hand separator made. Will last a lifetime. The



Reid Hand Separator

is guaranteed to do just what is claimed for it, and if the buyer is not satisfied with it, the money will be refunded. *Write and we don't ask you to do so.* Write at once for catalogue.

A. H. REID CREAMERY & DAIRY SUPPLY CO.
Philadelphia.

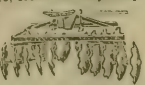
Agents—Dean & Co., Minneapolis, Minn., and
Mower-Harwood Co., Cedar Rapids, Iowa.

No Combines or Trusts in Cutaways.



Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the sub-soil water. It is an excellent machine for converting in sugar cane. Strength guaranteed.

Clark's Double Action Cutaway harrow moves 15,000 tons of earth in a day.
Send for Circulars.



Clark's Rev. Sulky Disc Plow



Made single or double. One or two furrows five to ten inches deep, 14 inches wide. For two or four horses. Light draft. No side draft. No similar

plow made. When Clark's grass tools are used as directed in his grass circular, we, the C. H. Co., guarantee them to kill wild mustard, charlock, hard back, sunflower, milk weed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seedling to grass.

THE CUTAWAY HARROW CO.
Higginam, Ct., U. S. A.

SILOS

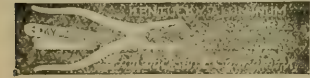
AND THE ONLY PATENT ROOF

The "Philadelphia."

Wood Tanks and Steel Structures
OF ALL SIZES.

E. F. SCHLICHTER,

1910 Market Street, PHILADELPHIA, PA.



FOR SAMPLES AND CIRCULARS ADDRESS
F. H. JACKSON & CO.
Agents Wanted. Winchester, Ky.

Mention the SOUTHERN PLANTER in writing.

BOOKS, CATALOGUES, ETC.

"A Short Trip to Town" is the title of a nicely gotten up catalogue of the Williams Telephone & Supply Co., of Cleveland, O. This company has been advertising its 'phones and supplies with us for several months past, so doubtless numbers of our readers have already gotten this catalogue. To those who have not, we say send for it, and you will be repaid for your trouble.

Catalogue and price list of sheep for breeding and feeding, Robert C. Brauer, Richmond, Va. Look up his advertisement elsewhere in this issue and send for this circular.

"How to Dress Poultry," price 25c. Published by T. Vaughan Stapler, Pittsburg, Pa. This booklet contains valuable hints for those who ship dressed poultry to market.

1905 catalogue of W. E. Caldwell & Co., Louisville, Ky., makers of all kinds of tanks, towers and tubs.

Wawa Dairy Farms, Wawa, Pa. Illustrated booklet descriptive of the farm, their management etc.

Eleventh annual greeting of Beechhurst Farm, Shelbyville, Ky., J. D. Stodghill, Prop.

The Fontaine Shock Binder, made by the Fontaine Co., Christie, Va. This shock binder is primarily intended for use in shocking corn. But it is equally useful in stacking small grain. It is easily used in this connection as a small rope may be drawn around the shock at the base, thereby preventing its spreading. Look up the ad. of the company in this issue.

SOIL INOCULATION.

Much is being written about the inoculation of soils with bacteria, to fertilize clover and the other legumes. On this subject I quote Prof. A. T. Wiancko, of the Indiana Experiment Station. He says: "In the case of clover, however, the crop has been so long and so widely produced in the State, the bacteria must be everywhere."

The remedy: "Wherever clover has been successfully grown, now fails or does not produce profitable crops, it is likely is due to a lack of mineral plant food in available forms or an imperfect physical condition of the soil. The remedy must not be sought for in inoculation, but in the application of suitable manures or fertilizers, better crop rotation and better tillage."

Lee's Prepared Agricultural Lime is a cheap fertilizer, and has been tested over twenty-five years. Its constituents—hydrate of lime, sulphate of lime, potash and sodium—furnish all the mineral fertilizers that are necessary for any of the legumes.

A. S. L.

Johnson Co., Tenn., May 20, 1905.
I am well pleased with your valuable paper, and will say that I like the SOUTHERN PLANTER the best of any of my farm papers. I am taking three others.
M. L. Shown.

Farmers Attention!

TWO-PLY ROOFING PAPER—"Fresh," 55 cents per square. You need it. Poultry Wire at 3c. yard. Makes a good fence. Mail your orders. Tell us your wants. We are here to serve you the best, at the lowest price. HARRIS HARDWARE CO., 409 E. Broad street, Richmond, Va.

WIRE BOARD FENCING

Lasts Longer
Looks Better

and is better. It is made of the best material. Let us mail you a sample. THE TRIN & ONE FENCE COMPANY.
82 Dean Ave., Woodford, O.

HARD STEEL

WIRE - FENCE

Heavy lateral wire, heavy hard steel stays, coiled spring wire. Sure Grip Lock. In strength, appearance and durability, the Hard Steel can not be excelled. Write for catalogue and prices. THE HARD STEEL FENCE CO., Cuyahoga Falls, O.

Fence and Gate Pointers. The best fence—made strong, of carefully selected, well galvanized wire—most economical to use. The "Jones" are made of best material and give satisfaction. Write for catalogue No. 8, and prices. International Fence Co. 88 Buttes-Av., Columbus, O.

Agents Wanted

WIRE—\$1.40 per 100 Lbs.

Wire is galvanized wire, put up in the best quality, length, running on to 200 ft. No 14 gauge, per 100 lbs. \$1.40. Write for prices on all our fences. Fence styles, per 100 lbs. \$1.00. Wire mesh, mixed in a box, per 100 lbs. \$1.00. Regular wire, per 100 lbs. \$1.00. Poultry netting, steel wire, etc. \$1.00 per yard. Ask for Catalogue No. 1, E. 106 on merchandise of all kinds from Sheriffs and Receivers' sales.

CHICAGO HOUSE WORKING CO., West 8th & Iron Sts., (Chicago)

FARM FENCE

PRICE AND QUALITY
WILL PLEASE YOU—
WRITE US NOW.

DOW-WIRE WORKS-LOUISVILLE, KY.

STUMP PULLERS

SEVEN SIZES
\$175 UP

DEPT. P. W. SMITH GRUBBER CO. LACROSSE WIS.

WE PAY THE FREIGHT
CATALOG
FREE

THE IMPROVED SCREW STUMP PULLER.

Write for Prices.

Chamberlin Mfg Co, Olean, N. Y., U. S. A.

Northern Virginia Farms

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 16-130 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$30 per acre.

No. 40-133 acres; one mile from town, on fine McAdam road. Nice 7 room house, 3 porches. Good well and springs. Good barn, with stalls for 10 cows and 5 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land sandy loam and clay. Two acres in orchard; trees in full bearing. Price, \$5,000.

No. 41-28 acres; 10 miles from Washington, D. C. 2 miles from an electric and steam railroad. Thirteen room house in nice shaded lawn; 2 cellars, well at house. Nice orchard, in full bearing. All necessary out-buildings in good repair. Price, \$3,500.

No. 42-30 acres; an elegant brown stone house, with 6 rooms, 2 porches. Three acres young orchard, in full bearing. All necessary out-buildings, in good repair. A large stone mill building, with 2 sets of corn bars, has 20 foot water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$2,000.

No. 47-100 acres; 2-1/2 miles from railroad; 50 acres cleared, all level and in fine state of cultivation. New 5 room house. Stable for 4 horses and 6 cows. Young orchard. Good well at house. Situated on popular dirt pike, in Loudoun county. Price, \$2,500.

No. 50-480 acres in Loudoun county, in the best grazing section of the State, all in grass; 12 room residence, situated on elevated ground in a large shaded lawn. An elegant large orchard in full bearing. Stabling for 50 cattle, farm grazed and fattened 45 export cattle last season. Well fenced, and an abundance of running water. Price, \$44.00 per acre.

No. 52-620 acres excellent grazing, cleared land, well set in grass, and a little rolling. 20 acres fine white oak timber, balance of land cleared. Nine room house, with 2 barns, 2x10, sheep house 2x50, and all the usual farm houses, all in good repair. Large orchard of all kinds of fruit, in full bearing. Farm watered by springs and streams, water in all the fields, land is all well fenced, has now about in large cattle, in addition to sheep, horses and colts. Price, \$16.00 per acre. Easy terms.

No. 55-515 acres, natural Blue Grass land, well fenced; elegant well water. Good 2 room house, with all the necessary small farm houses in good repair; good sheep barn 2x30. Thirty young orchard of apples, peaches, pears and cherries. Land is all in grass, except about 40 acres, that is in corn, now. Close to schools, church, mill and post office. Four miles from railroad. This farm usually sends off from forty to fifty export cattle in September. It is located in a beautiful section of the county of Loudoun, 25 miles from Washington, D. C. Price, \$15.00 per acre; one-third cash.

No. 65-520 acres; 16 acres in timber, balance cleared. Good 4 room frame house; one-half mile from yard, nice shaded lawn; excellent miles from school, church, stores, mill, post-office and shops. Thirty young orchard bearing to bear; good grass land; well fenced. Situated on 50 foot Meunandized Pike. Price, \$20.00 per acre, easy terms.

No. 66- Large merchant mill, new process, all modern improved machinery, cost about \$14,000, situated in one of the finest grain sections of Northern Virginia, two and one-half miles from the Potomac. Ample water power in ordinary seasons, but dried up with a splendid boiler and engine to aid power in the event of a drought. For sale to settle an estate. Write for full description. Price, \$7,500.00, on very easy terms.

Write for full information and price list of other farms.

W. E. MILLER, Herndon, Va.

"THIS IS THE WEIGH I LONG SOUGHT."

Miss Willin—"This is so sudden—but don't go and tell people that when you proposed I just jumped at you."

Litewalt (as he holds her on his knee)—"No; I'll tell them you sat on me real hard when first I asked you to marry me."—Woman's Home Companion.

GIBSON'S LICE KILLER.

We have pleasure in calling attention to the advertisement of Gibson & Lamb in another column. This firm has been advertising its Liquid Lice Killer, which is positively guaranteed to do what is claimed for it, for some time with us. They will be very pleased to mail circulars or quote prices to any one interested in removing lice, mites and fleas from fowls, cattle, hogs, horses, dogs and cats.

NEW BLOOD AT ELKTON STOCK FARM.

The Elkton Stock Farm, Forest Depot, Va., a regular advertiser in the SOUTHERN PLANTER, advises us that it recently purchased two cars of cattle and hogs from Kentucky. Among the hogs are the two famous Berkshire boars, Royal Bachelor, 60513, and Reality Duke, 56786. The former weighed 920 pounds and the latter 1,030 pounds when in show condition.

We congratulate Elkton Farm on its purchase and pluck in introducing and disseminating good stock in this section.

THE BEST REMEDY OF THE KIND.

Pierson, Fla., March 19, 1904.
The Lawrence-Williams Co., Cleveland, O.:

I received the bottle of Gombault's Caustic Balsam. My horse had a very bad sprain of left fore leg of long standing. The liniment was applied as directed and the result was satisfactory. The best remedy of the kind I have ever seen.

GEO. KEER, M. D.

Hamblen Co., Tenn., May 18, 1905.

I consider the SOUTHERN PLANTER the best agricultural journal in the South.

W. B. DOAK.

Pittsylvania Co., Va., May 20, 1905.

Do not stop the SOUTHERN PLANTER. I cannot get along without it.

DAVID JONES.

Washington Co., Fla., May 18, 1905.

The SOUTHERN PLANTER is one of the best friends the farmer has, and none should be without it.

ED. B. BANKS.

Chowan Co., N. C., April 18, 1905.

I do consider the SOUTHERN PLANTER a grand issue, and feel proud that I am a subscriber, because I realize valuable information.

D. G. BOND.

A Farm Bargain.

Tract of 189 1-4 acres, over 100 cleared, 22 being rich river bottom and 10 of rich creek flat, rest of land fairly productive and well adapted to corn, wheat, oats and tobacco, or would make a good stock farm; fine timber, consisting of oak, pine, poplar, etc. Place is fairly well fenced with rail; small orchard of apple, peaches, etc. Large 8-room frame dwelling, lovely flowers, store-house on place, 2 large barns, 2 corn houses, smoke-house, poultry house, cow sheds, with best of drinking water; one-half mile to school and saw-mills office, 1 mile of church; grist and saw-mills near by; 5 miles of county seat, good community. Will be sold cheap. Write for price and particulars to W. B. PAYNE, care W. L. FLANAGAN, Charlottesville, Va.

To Home Seekers

"Virginia, Her Agricultural and Industrial Resources," is the title of a new pamphlet issued by the Norfolk & Western Railway Co. We will gladly send you a copy. F. H. LA BAUME, Agr. and Ind. Agent, Roanoke, Va.

I Can Sell Your Real Estate or Business, NO MATTER WHERE LOCATED.



Properties and business of all kinds sold quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same.
A. P. TONE WILSON, Jr.,
Real Estate Specialist,
TOPEKA, KAN.

Northern Virginia,

Grain, Fruit, Dairy and Blue Grass Farms of every class within one hour of Washington, D. C.

LOUDOUN COUNTY Farms a Specialty

Catalogue on application.
P. B. BUELL & SON,
Real Estate Brokers,
Herndon, Fairfax Co., Va.

Home Seekers and Speculators.

I am in position to show you the largest list of properties you can find in Northern Virginia, consisting of STOCK, GRAIN, DAIRY, FRUIT, POULTRY, TRUCK, and BLUE GRASS farms. VILLAGE HOUSES and BUSINESS SITES all within 1 to 2 hours of the National Capital. For free catalogue and full particulars, call on or address W. H. TAYLOR, Herndon, Va.

FINE FARMS in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address
ALBEMARLE IMMIGRATION CO.,
SAM'L B. WOODS, Pres. Charlottesville, Va.

Productive Farms,

Hanover county, between the mountains and Tidewater. Land and seasons conducive to successful farming. FRANK H. COX, Ashland, Va.

Mention THE SOUTHERN PLANTER in writing.

VIRGINIA ..AND.. THE PLACE ...TO... FIND THE BEST HOMES

Where Health, Climate, Soil, Location and markets are unsurpassed. Any size, place and price to suit the buyer of a stock, truck, fruit, poultry or fish and oyster farm. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 36 P. pamphlet giving full particulars.

W. A. PARSONS,
C. & O. Main St. Depot. - - Richmond, Va.
ESTABLISHED 1875.

Splendid Business FOR SALE

Being unable to attend to the business, I will sell at a great bargain a general merchandise business, stock about \$2,000. Good place for business. Large store, opposite depot, on N. & W. Railway, in Bedford county. Address S. H. PRICE, Montvale, Va.

WE CAN SELL

YOUR FARM

NO SALE, NO CHARGE.

If you want to buy, write for free catalogue.

R. B. CHAFFIN & CO., Inc., Richmond, Va.

"In the Green Fields of Virginia."

Homes for ALL; Health for ALL; Happiness and independence for ALL. ALL sizes of FARMS at corresponding prices, but ALL reasonable.

MACON & CO., Orange, Va.

VIRGINIA FARMS

\$3 PER ACRE AND UPWARDS.

EASY PAYMENTS. CATALOGUE FREE

GEO. E. CRAWFORD & CO., Richmond, Va.

Established 1876.

OLD VIRGINIA

FARMS of every description. Good lands Low prices. Liberal terms. Convenient to churches, schools and railroads. A very mild climate. Write for our new catalogue. CASSELLMAN & CO., Richmond, Va. P. O. Box 257.

FARM WANTED

on shares, with reliable party, by a first-class man, experienced in farming, dairying, butter-making, cattle, sheep, swine, poultry gardening, flowers, fruits and vegetables. Please give full particulars. E. B. care Southern Planter.

••• VIRGINIA FARMS •••

Nice little poultry farm, 100 acres, good house and orchard, \$600.00. Blue Grass, Stock and Fruit Farms. Address PORTER & GATES, Louisa, Va.

Go South.

For full particulars write
A. JEFFERS,
Norfolk, Va.

In writing mention Southern Planter

ALLEGES LIBEL AND SLANDER.

Empire Cream Separator Co. Institutes Proceedings Against Two of Its Competitors.

Summonses were filed in the Hudson county sheriff's office in Jersey City to-day by Riker & Riker, of this city, in two suits brought to recover heavy damages for alleged libel and slander. The Empire Cream Separator Company, of Watseung, figures as the plaintiff and the De Laval Separator Company and the De Laval Dairy Supply Company, both with headquarters in the Corporation Trust Company, Jersey City, are the defendants. In the case against the De Laval Separator Company the sum of \$200,000 is asked, and in the other \$100,000.

All three concerns are New Jersey corporations, and manufacture machinery used in the making of cream, butter and cheese. The plaintiff company, formerly known as the United States Butter Extractor Company, is the largest of the three, having a capitalization of \$1,225,000, with the De Laval Separator Company next, with \$100,000 capital, and the Dairy Supply Company, with \$50,000. The latter two are controlled by Swedish financiers. The Empire Company made a specialty of cream extracting machinery, designed upon what is known in the trade as the "bowl" principle, whereas the defendant companies utilized a "disc" pattern.

It is set forth in the declaration that June 30th last the defendant companies issued circular letters to the trade, their superintendents, representatives and agents generally to the effect that the Empire Company had decided to abandon the manufacture of the bowl pattern machines, as they were antiquated and not as good as the disk machines of the defendant corporations. The latter further declared, it is alleged, that the Empire Company was stocked with 5,000 of the old machines, which it was anxious to sell to the trade, and that it had experienced a poor season, the missive closing with the words: "You may use this."

For issuing the alleged circular letter the Empire Company sues for damages for libel and for the alleged instruction to representatives to use the information contained in it the company seeks monetary balm on the ground of slander.

Henning G. Taube, of Montclair, is president of the Empire Company, and Ernest E. Bell, of Glen Ridge, general manager.—*Newark Evening News.*

Alamance Co., N. C., May 8, 1905.

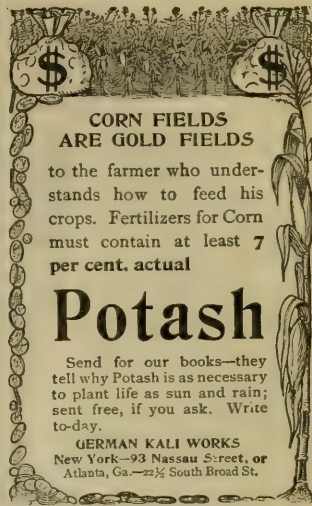
I like the SOUTHERN PLANTER very much. It ought to be read by every farmer.

C. L. LEWIS.

Henrico Co., Va., May 8, 1905.

I wish every farmer in Virginia would take the SOUTHERN PLANTER. I consider one number more than worth the subscription price.

FRANK L. HUTCHINGS.



**CORN FIELDS
ARE GOLD FIELDS**

to the farmer who understands how to feed his crops. Fertilizers for Corn must contain at least 7 per cent. actual

Potash

Send for our books—they tell why Potash is as necessary to plant life as sun and rain; send free, if you ask. Write to-day.

GERMAN KALI WORKS
New York—93 Nassau Street, or
Atlanta, Ga.—22½ South Broad St.



Genuine Imported

PERUVIAN GUANO,

The Richest Fertilizer Known.
Absolutely pure and from the same islands it came 30 years ago. No filler nor injurious substance in this guano.

ANALYSES:

Chincha:	Lobos:
9.50 per cent. Lime...	13.50 per cent.
20.50 per cent. Bone Phos...	50.00 per cent.
8.30 per cent. Ammonia...	3.80 per cent.
2.00 per cent. Potash...	4.25 per cent.
9.00 per cent. Phos. Acid...	23.00 per cent.
Organic Matter and Ammonia Salts...	28.00 per cent.
	13.00 per cent.

Inquire of your DEALER; if he has not got it, write to

OLIVER SMITH COMPANY,
Wilmington, N. C.

SHIPMENTS FROM { NORFOLK, WILMINGTON.

"Crop Growing and Crop Feeding."

By PROF. W. F. MASSEY.
383 Pp. Cloth, \$1.00; Paper, 50c.

We offer this splendid work in connection with the SOUTHERN PLANTER at the following prices:

Southern Planter and Cloth Bound Volume, \$1.25.
Southern Planter and Paper Bound Volume, 90c.

Old or new subscriptions.

THE TRIUNE FRUIT ...AND... PRODUCE CO.

can handle your shipments of
EGGS, POULTRY, PEAS and
VEGETABLES.

Can fill orders for LEMONS,
APPLES, ORANGES, LINES
and BANANAS. Best stock at
lowest prices.

TRIUNE FRUIT & PRODUCE CO.,
24 Roanoke Dock,
NORFOLK, VA.

FARMERS Insure Your Buildings.

LIVE STOCK PRODUCE, &c.

Write for booklet giving plan
and explaining how you can
become a member of the...

Farmers Mutual Benefit Ass'n,

their working object is pro-
tection. Property insured,
\$10,000 average cost per
\$1.00 per year, \$1.00.
Memberships and risks lim-
ited to Eastern Va.

CHAS. A. FRIEND Gen. Agent, Virginia Division,
CHESTER, VA.

ORGANIZED JANUARY 9, 1890.

Chemical Analyses

of MINERALS, FEEDING MATERIALS,
WATER and other products made at reason-
able rates. Correspondence solicited. J. B.
WEEMS, Ph. D., Crewe, Va., Expert in
Agricultural and Industrial Chemistry.

SPECIAL.

All who desire to keep consumption
from their homes, children or friends, or
have acute and chronic rheumatism afflicted
should write for the free directions to the

**Virginia Sanatorium for
Consumptives,
Ironville, Virginia.**

A benevolent institution for care of the
poor consumptive and for the protection
of the community.

All are invited to membership.

TOOL QUALITY AND PRICE.

A Motto That Made a Marvellous
Change.

Thirty-six years ago a firm in St. Louis arrived at a decision that was to change the entire business of making and selling tools.

The decision was this: That people wanted quality in a tool, and that quality should be maintained in their tools regardless of everything else. That quality should be the thought first, last and all the time.

A mark and motto was adopted that would forever link their tools with quality—"the recollection of quality remains long after the price is forgotten." With the meaning of this motto always in mind, Keen Kutter tools have been manufactured ever since by the Simmonds Hardware Company.

The name Keen Kutter covers a complete line of tools, so that no matter what you want in the way of a tool you can make sure of quality and satisfaction by simply asking for the Keen Kutter brand—a Keen Kutter axe, Keen Kutter saw, Keen Kutter adze, Keen Kutter plane, Keen Kutter knife, Keen Kutter chisel, Keen Kutter file, Keen Kutter gimlet, etc. This method of having one general brand for all tools greatly simplifies buying, and does away with all chances of the purchaser getting a bad tool, as every Keen Kutter tool is tested before leaving the factory, and if it has the slightest blemish it is cast aside.

As an evidence that Keen Kutter tools are the standard of America to-day in the eyes of expert judges, this brand was the only complete line of tools to receive the Grand Prize at the St. Louis Exposition. Yet Keen Kutter tools, superior as they are in quality, cost but a trifle more at first than inferior kinds and in the long run are much more economical.

If your dealer does not keep Keen Kutter tools, write the Simmonds Hardware Company, St. Louis, Mo., and 298 Broadway, New York, who will see that you are supplied.

A GOOD INVESTMENT.

There is money to be made by any intelligent farmer with a portable saw mill. It assures good wages for horses and men during the "off season" when otherwise the time would have to be devoted to unprofitable "odd jobs."

A splendid mill for this purpose is the one manufactured by the De Loach Mill Mfg. Co., of Atlanta, Ga. It has few parts, is easy to understand and to operate, and is sold at an attractive price. They will be glad to send their catalogue to any one who will mention this paper. Its worth having.

Roanoke Co., Va., April 17, 1905.

The SOUTHERN PLANTER gets better and better. Rev. W. H. WORKMAN.

Washington Co., Ga., April 28, 1905.

I like the SOUTHERN PLANTER very much. A. C. DUGGAN.

Make Your Idle Money Earn You Interest.

Write the **FIRST NATIONAL BANK** of RICHMOND, VIRGINIA for information concerning its certificate of deposit, so arranged that one per cent. may be collected each **FOUR MONTHS** through your nearest bank or store.

Our experience proves this form for savings to be the most satisfactory plan yet devised for deposit of \$100.00 or more.

Our Capital and Surplus is \$100

ONE MILLION DOLLARS.

JOHN B. PURCELL, President.

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MONEY SAVED

DO YOU EVER INTEND TO BUY A PIANO? If so, read this and buy now. Never before have you had as fine an opportunity to buy a fine piano at such a great sacrifice of price. We are to take inventory and must reduce our immense stock. Here is your life's chance. Look at these prices:

A fine \$500 upright.....	\$345
A fine \$450 upright.....	\$250
A fine \$400 upright.....	225
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Square pianos at your own prices from \$30 to \$100. Organs from \$20 to \$55. Write us to-day for full information and catalogues.

WALTER D. MOSES & CO.,

103 E. Broad street, Richmond, Va.

ESTABLISHED 1879.

Oldest Music House in Virginia.

Situation Wanted

by an English farmer, married, age 55 years; had lifetime practical experience in management of estates in England and prize pedigree stock; four years manager for R. W. Hudson, of Danesfield, Great Marlow, Buckingham, England. The prize Berkshire pigs now advertised by the Biltmore Farms were bred and raised by advertiser at Danesfield. "Highest references." Apply to TURNER, London Bridge, Va.

GREAT BARGAIN.

HUBER 10 H. P. THRESHING

Outfit with Saw Mill for sale. Write for particulars. PAUL NEDVIDEK, Holdcroft, Va.

FARM TELEPHONES

How to put them up—what they cost—why they save you money—all information and valuable book free. Write to J. Andrus & Sons, 994 W. Water St., Milwaukee, Wis.

Gov't AUCTION REVOLVERS, GUNS, Swords and Military Goods. NEW and old. Bargains for use or decorating. Large illustrated 15c. catalogue mailed 6c. stamps. Francis Lannerman, 519 Broadway, N. Y.

..Second Hand Bags..

Wanted. Any kind, any quantity, anywhere. I pay the freight. GEO. T. KING, Richmond, Va.

Lump Jaw



Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use

Fleming's Lump Jaw Cure

No trouble—rabbit-on. No risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free book tells you more.

Spavin and Ring-bone


Once hard to cure—easy now. A 45-minute treatment does it. No other method so easy—no other method sure.

Fleming's Spavin and Ringbone Paste

cures even the worst cases—none too old or bad. Money back if it ever fails. Free illustrated book about Lump Jaw, Spavin, Ringbone, Splint, Box Spavin and other stock ailments. Write for it.

FLEMING BROS., Chemists.
280 Union Stock Yards. Chicago, Ill.

USE
Horsemen, DR. TURNBULL'S CURINE
The Great American Veterinary Remedy.



CURINE

A SAFE AND POSITIVE Cure for Spavin, Splints, Curbs, Ringbone, Bony Growths, Rheumatism, Sprains, Knees, Lameness of all kinds, etc.

It is the most powerful pain-killer known, and supercedes all Caustic or Firing.

NO BLEEMISH!
NO HAIR GONE!
It effects ARE ABSORBENT, ALTERATIVE, PENETRATIVE and ANTISEPTIC. and it will reach the deepest seated trouble. For sale at all dealers.

H. S. BOSSART & CO.,
430 Fourth Ave., PITTSBURGH, PA.
Price: Large Bottles, \$3; Small Bottles, \$1.
Send 2c. stamp for our 36 page Little Giant up-to-date book on the principal diseases of the horse, causes, symptoms and treatment, with testimonials and directions for CURINE

BEST ON EARTH



We have hundreds of letters from users of

Kendall's Spavin Cure

who declare it to be the "Best remedy on earth" for Spavins, Ringbones, Splints, Curbs and all forms of lameness. Your experience will be the same if you try it.

Price \$1.10 for 35. As a treatment for family use it has no equal. Ask your druggists for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address **DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.**

ONLY ONE PRESCRIPTION.

Dr. M. S. Fielder writes: "I know Tetterine to be a radical cure for salt rheum, eczema and all kindred diseases of the skin and scalp. I never prescribe anything else in all skin troubles."

50 cents a box at druggists or by mail from J. T. Shup-traine, Savannah, Ga.

Bathe with Tetterine Soap, 25c.

FREE LITERATURE FOR VIRGINIA FARMERS.

Several bulletins have recently been issued by the Experiment Station and will be distributed free of cost to all farmers in the State who apply for them. One of these bulletins deals with "The Composition of Cider as Determined by Fermentation with Pure Yeast." The report shows that by the use of pure cultures of yeast the manufacture of cider can be controlled and a uniform product obtained.

Another publication deals with "Apple Production in Virginia." The center of the apple industry is in the Valley, next comes Piedmont, and then Middle Virginia. The smallest number of apples are naturally produced in the Tidewater region. The report shows that the apple crop of 1903 amounted to 327,488 barrels, of which the valley furnished 260,597 barrels.

The third publication treats of "Experiments with Caustic Soda and Some Patent Washes Against the San Jose Scale." This is a very important publication because it shows how the most dreaded pest of the orchardist may be successfully held in check. It is interesting to know that the lime-sulphur wash proved more effective than any of the so-called patent washes, and it can be manufactured at home at a much smaller cost than any of the others.

The fourth publication treats of spraying with kerosene emulsion for the destruction of the horn fly. At certain seasons of the year these pests come in very large numbers, and prove most annoying to beef and dairy cattle. The method outlined in the bulletin for the destruction of the horn fly is comparatively simple and easy of adoption on stock farms, and it proved very effective in experiments made last summer at the station.

ANDREW M. SOUTHE,
Director.

"Yep," replied the angelic boy, "got three. Me and Jack and Billy and Frank."

"Which one do you like best?"

"Jack, I guess," replied the youngster after a moment of deep thought.

"Yen, I like Jack best."

"And why," asked the young woman, "do you like Jack best?"

"Cause he did such a lovely errand for me once."

"What was that lovely errand?"

"He bit Billy on the leg," replied the sweetly serious cherub.


"Why," nursed the young woman, "didn't you do your own biting?"

"Cause I hate the taste of Billy's legs," was the calm reply.—Lippincott's.

Stafford county, Va., Mar. 10, 1905.

I think the Southern Planter is the best farm paper I have ever read, and that it should be in the hands of every man who owns a piece of land, if it is but a garden spot.

W. S. Cox.



Warranted to give satisfaction

GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.60 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio

THICK, SWOLLEN GLANDS

that make a horse Wheeze, have Thick Wind or Choke-down, can be removed with

ABSORBINE

or any Bunch or Swelling caused by strain or inflammation. No blister. No hair gone and horse kept at work. \$2.00 per bottle, delivered. Book \$3-B free. **ABSORBINE, JR.,** for mankind, \$1.00 delivered. Cures Coughs, Tumors, Varicose Veins, Etc. Book free. Made only by **W. F. YOUNG, P. D. F.**
109 Monmouth St., Springfield, Mass.



DEATH TO HEAVES

Guaranteed

NEWTON'S Heave, Cough, Dis-temper and Indigestion Cure. A veterinary specific for wind, throat, and stomach troubles. Strongly recommended. \$1.00 per can, of dealers, or Exp. prepaid. **The Newton Remedy Co., Toledo, Ohio.**

NO MORE BLIND HORSES.

For Specific Optalmia, Moon Blindness, and other Sore Eyes, Barry Co., Iowa City, Ia. have a cure.

WANTED!

ALL KINDS OF

LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

DR. CECIL FRENCH,
718 Twelfth St. N. W., Washington, D. C.

100 Foxes Wanted.

The Mecklenburg Hotel and Mineral Water Co. will pay \$125 each for 100 good catch size Foxes. Write and express as above. Chase City, Virginia.

CUT PRICES! 5,000

New Customers wanted to add to our already large list. As an inducement we will sell eggs for balance of this season at our famous

Thoroughbred Poultry

as follows:

	Per sitting.	
Barred P. Rocks	..... 15	\$.30
White P. Rocks	..... 15	.30
Buff P. Rocks	..... 15	1.30
Black Langshans	..... 15	.30
Buff Langshans	..... 15	2.25
White Wyandottes	..... 15	.35
Buff Wyandottes	..... 15	.35
S. C. Black Minorcas	..... 15	.35
S. C. White Minorcas	..... 15	1.10
American Boudinques	..... 15	1.00
Pearl Game	..... 15	1.00
R. C. Brown Leghorns	..... 15	.35
S. C. Brown Leghorns	..... 15	.35
R. C. Buff Leghorns	..... 15	1.15
S. C. Buff Leghorns	..... 15	1.15
S. C. White Leghorns	..... 15	1.00
S. R. C. White Leghorns	..... 15	2.00
S. C. Buff Orpingtons	..... 15	1.25
S. C. White Orpingtons	..... 15	1.65
Corish Indian Games	..... 15	1.30
White Indian Games	..... 15	1.30
R. C. Rhode Island Reds	..... 15	1.10
Imperial Pekin Ducks	..... 11	1.15



FREE! A copy of **HEATWOLE'S BOOK ON POULTRY FOR 1905**. This book illustrates and tells all about over 45 varieties of Best Poultry. It tells how to treat diseases, feed and care for poultry with success. Order from this advertisement and get the book **FREE** with your order for eggs while the books last.

JOHN B. HEATWOLE,

Box L. Harrisonburg, Va.

HOLLYBROOK FARM.

Barred Plymouth Rock,

EGGS FOR SITTING.

\$1 per 15 eggs packed and delivered to express company. For prolific laying and general utility our Barred Plymouth Rocks are not surpassed anywhere. We can also supply eggs for sitting from **WHITE** or **SILVER LACED WYANDOTTES** at \$1.50 per sitting of 15 eggs. Address orders **HOLLYBROOK FARM, P. O. Box 330, Richmond, Va.**

Richmond's Best Breeds

won at Hagerstown, Richmond and Atlanta. Eggs from prize winning

WHITE, BUFF and BROWN LEGHORNS, WHITE and BLACK MINORCAS, B. P. ROCKS.

FLYING HOPPER PIDEONS,

each variety raised by a **SPECIALTY BREEDER** on his own yard. **C. G. M. PINK, R. F. D. 2, Richmond, Va.,** representing Richmond breeders.

A TRIO OF CHAMPIONS.

"That a man's weakness" is also his 'strong point' is fully demonstrated by the career of Mr. M. W. Savage, proprietor of International Stock Farm, Minneapolis, Minn. The first conspicuous purchase of Mr. Savage in the trotting horse line was a world's champion, the lion hearted trotting king, Directum 2,054, the world's long reigning champion trotting stallion, and since then he has added to his string of champion stallions till he now owns three of them, namely, Dan Patch, 1,56, the fastest harness horse in the whole world; Directum, 2,054, for many years the champion trotting stallion of the world, and still the world's champion four-year-old trotting stallion, and lastly he added the \$125,000 Arion (2), 2,103, (3), 2,103, (4), 2,073, still the reigning two and three-year-old champion trotting stallion of the world. It is only when one stops to think soberly and considerably of this group of stallions that one can grasp and fully realize the stupendousness of Mr. Savage's accomplishments and possessions in the champion stallion line. To own one champion stallion is quite sufficient to satisfy the average man's ambition, but three of them satisfies Mr. Savage's ambition none too well, and, like Alexander the Great, it is most likely that he seeks 'other worlds to conquer,' other champions to own, and their services to offer to the trotting horse public on most reasonable terms. Verily, 'Three World's Champion Stallions' and '3 Feeds for One Cent' make a 'winner' combination, both for Mr. Savage and his business patrons."—From Western Horseman, Indianapolis, Ind.

THE REMEDY THAT INSPIRES FAITH AND BRINGS RESULTS.

The following is a copy of a letter recently received by Dr. Jos. Haas, of Indianapolis, Ind., the manufacturer of the famous Hog & Poultry Remedy that has been manufactured and has stood the test of almost thirty years before the public, which alone is sufficient proof of its merits.

Richmond, Va., Mar. 31, '05.
Jos. Haas, V. S., Indianapolis, Ind.:

Dear Sir,—I have great faith in your Hog Remedy for just before sending you my order I lost several hogs that were only sick a few days, but after receiving your Remedy, I mixed it thoroughly in wet bran and ship stuff and fed it to the rest of the hogs, every other day, and since then I have found no sickness and have suffered no loss whatever. I cannot recommend your Remedy too highly, and speak of it to my friends and advocate its use at every opportunity. I have quite a large number of hogs to which I am feeding the Remedy regularly and would not be without it. Respectfully,

WM. HARPER DEAN.

EGGS CHICKENS

S. C. Brown Leghorns S. C. Black Minorcas

PRIZE WINNERS

\$2.00 Eggs, \$1.00 per 15,
\$3.00 Eggs, \$1.50 per 15,

For the rest of the season.

Fowls from my breeding pens at half price for quick sales; \$5.00 birds for \$2.50; Leghorns, \$1.00 each.

C. H. Staunton, Newport News, Va.

Eggs=Eggs=Eggs!

Just to advertise our stock we offer 15 of our famous R. P. Rock eggs from Bradley prize stock for \$2.00, (worth \$6.00). Also 15 S. C. B. Leghorn eggs for \$1.50 Bred for utility and beauty. Strawberry Hill Poultry Yards, Box 287. . . . Richmond, Va.



BUFF ORPINGTON

Eggs for all at BIG REDUCTION. 15 Eggs, \$1. or \$6 per 100. This is a farm range flock of 75 beauties, headed by second prize Augusta, Ga. 1904, Cockerel. All Solid Buff. 10 very fine Pullets yarded and headed by a first prize Augusta, Ga. 1904, Cockerel. A few eggs from this select pen at \$3 per 15, or \$5 for 30. A few Cockerels at \$1. Pedigreed POLAND CHINAS; young pigs and sows. **OCCONEECHEE FARM, Jeffers, Mecklenburg Co., Va.**



Valley Farm. S. C. B. Leghorns. (FORSTYH STRAIN) BARRED ROCKS.

Eggs for sale from as fine matings as can be found.

CHAS. C. WINE,
Mt. Sidney, Va.

Huguenot Orpingtons

Imported from Wm. Cook's yards, England. Eggs, \$3 for 13. Stock from Eastes' Importation. Eggs, \$1.50 for 13. MOTTLED ANTON. Eggs, \$1.50 for 13. B. and W. WYANDOTTES, eggs, \$1 for 13. All winter layers. A few pure Oakshade M. B. TURKEY TOMS at \$4 each. **HUGENOT POULTRY YARDS, Dublin, Va.**

EGGS FOR HATCHING.

\$1 for 15. Black Minorcas, Black Langshans, Barred and White Rocks, Light Brahmas, S. L. Wyandottes, S. C. W. Leghorns, S. and R. C. B. Leghorns. A few more S. L. Wyandotte cockerels for sale, \$1 each. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

Fresh Laid Eggs

for hatching from LANDOR POULTRY YARDS, Croxton, Va. Orders here MAMMOTH BRONZE TURKEYS, White Wyandotte and Barred Plymouth Rock eggs and get the largest and best. Safe delivery guaranteed. MISS CLARA L. SMITH, Proprietor.

LOUHOFF'S

White Wyandottes,
White and Brown Leghorns,
Barred Plymouth Rocks,
PIEDMONT HEIGHTS FARM,
Yancey Mills, Va.

BUFF ORPINGTONS

Eggs for a short while at \$1.00 for sitting of 15, or \$3.00 for 50. THREE FINE COCKERELS at \$1.00 and \$1.50 each.

BLACK LANGSHAN eggs 75 cents for sitting of 15. Address G. W. HARDY, Oakley, Va., Station, Jefferson, Mecklenburg County, Va.

Buff Leghorns,

the most wonderful layers, the most energetic hustlers of any known breed. I now have 3 pens and will henceforth be able to supply orders more promptly. Satisfaction and safe arrival guaranteed. Eggs, 15 for \$1.50; 30 for \$2; 50 for \$3; also Rhode Island Reds; eggs, 15 for \$2; 30 for \$3; 50 for \$4. A. R. VENABLE, JR., Box 147, Farmville, Va.

SOME FINE

Barred Plymouth Rock

hens for sale; also eggs for hatching. \$1 per sitting of 15. TOPLAND POULTRY FARM, Blacksburg, Va.

BUFF ORPINGTONS

... EXCLUSIVELY ...

FROM JUNE 1st.

We have reduced our eggs to \$1.00 per 15; \$6.00 per 100. Send for circular.

Address B. O. POULTRY YARD, Mitchells, Va.

Send for Free Descriptive Catalogue of Thoroughbred Poultry.

Description of 10 varieties best poultry—Langshans, Orpingtons, Leghorns, Wyandottes and Buff Rocks. Satisfaction guaranteed. Send to-day. Mention Southern Planter. Address JOHN S. WENGER, Dayton, Rockingham Co., Va.

S. C. White Leghorn

Eggs for Hatching. Thoroughbred to lay in winter. The hens are beauties, and so are the eggs. \$1 per setting of 15. MISS MARIA BROWN, Cartersville, Va.

This May Interest You.

♥♥♥♥ MY BARRED ROCKS ♥♥♥♥
Are stock-improving, blue-barred-to-skin kind. Closely related to New York Prize Winners. Eggs in season. L. W. WALSH, Box 194, Lynchburg, Va.

THERE IS A BIG DIFFERENCE.

Laundry soap is intended for coarse work, such as washing clothes. Toilet soap is suited to taking the dirt from the skin. Shaving soap is different—or ought to be. It should thoroughly moisten the hairs, hold them firmly against the razor, and then leave the skin smooth, cool and velvety. Williams' Shaving Soap will do just this. The J. B. Williams Co., Glastonbury, Conn., have made a specialty of shaving soap for nearly three-quarters of a century, and it is the "only soap fit for the face." In another column they offer to send a free trial sample. Be fair to your face and send for it.

BUGGY BARGAINS.

With the advent of pleasant weather many of our readers are considering the purchase of a new vehicle of some sort, perhaps a driving wagon, a buggy, a phaeton or a surry. We invite



the attention of those interested to the ads of Elkhart Carriage & Harness Co., which have appeared in our advertising columns.

We show here two of their popular styles which we hope will incline the interested reader to write for their catalogue which shows over 200 styles of vehicles and 65 styles of harness.

Now a word about the company. This house was established almost one-third of a century ago by the father of Messrs. W. B. and G. B. Pratt who



are now conducting the business. They are now among the oldest as well as the largest factories in the world making and selling vehicles direct to the consumer.

Write at once for their catalogue which they will mail free. Address Elkhart Carriage & Harness Mfg. Co., Elkhart, Ind.

Grayson Co., Va., April 18, 1905.

I like the SOUTHERN PLANTER very much. It is worth many times its cost to any farmer. L. W. S. HALE.

Powhatan Co., Va., April 23, 1905.

I think the first thing I need is the SOUTHERN PLANTER. H. J. PRATT.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Echo Farm Poultry

S. C. B. LEGHORNS, Exclusively.
Eggs for Hatching \$1.00 for 15, \$6.00 for 100.
Incubator Chicks from machine, \$10.00 per 100.
Incubator Chicks 2 weeks old, \$15.00 per 100.

No Turkey eggs to spare this month.

CAL HUSSELMAN, R. F. D. 6, Richmond, Va.

JUNE EGGS

\$1.00 PER SITTING.

White P. Rocks. Brown Leghorns.

young stock for sale in fall.

SWEET POTATO PLANTS, 15c. 100.

R. W. HAW, Jr., Centralia, Va.

26 S. C. B. Leghorn

Eggs for \$1.00.

PEDIGREED COLLIE pups \$5 each. Grown dogs cheap. A certain cure for CHICKEN CHOLERA, also sure cure for gapes, 25c. each. Mrs. L. E. BENNETT, Hollins, Va.

SINGLE COMB

BROWN LEGHORN

Eggs for sale; 15 for 75c., 30 for \$1.25. Send us your order and get a good stock of chickens. We give satisfaction. Prompt shipment.

Stock for sale after August.

"The Manager of Meherria Poultry Farm is well known to me, and is thoroughly reliable."—S. B. Coggin, Agt. So. Ex. Co. MEHERRIA POULTRY FARM, Branchville, Va.

Rose Comb

WHITE LEGHORNS and WHITE WYANDOTTES for sale. Good stock. Eggs in season. \$1 for 15. J. W. NICHOLS, Grove, Va.

15 EGGS ONLY 75 C.

From choice pure-bred S. C. BUFF ORPINGTONS or R. C. WHITE LEGHORNS.

Order direct from Ad. Satisfaction guaranteed. T. M. KING, Hagan, Va. R. F. D. No. 2.

THE CHICK BOOK

"From the breeding pen through the shell to maturity."

Contains the experience of the world's leading poultrymen, and all the latest and most trustworthy information about hatching, rearing, fattening and marketing chickens. Price, 50c. THE SOUTHERN PLANTER, Richmond, Va.

BAGS

FOR EVERYTHING;
NEW OR SECOND-HAND;
SOLD OR RENTED.
Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.

Badly Cheated

The man who buys poor shaving soap. Give your face its due. Use

WILLIAMS' SHAVING SOAP

Sold everywhere. Free trial sample for 2-cent stamp. Write for "The Shavers' Guide and How to Dress Correctly."

The J. B. Williams Co., Glastonbury, Conn.

Death to Hawks

Macnair's Chicken Powder

Kills Hawks, Cures Cholera.

FREES CHICKENS OF VERMIN

... AND ...

Makes Hens Lay.

To be convinced send for a package

Price 15c or 2 for 25c; Postage 4c per Pkg.

FOR SALE ONLY BY

W. H. MACNAIR, Druggist,

Troy, N. C.

No Lice

Where Gibson's Liquid and Powder is used. Kills all lice on Poultry and Stock instantly. Easily applied, your money refunded if it fails.

Write for prices,

GIBSON & LAMB,

Box 128.

West Alexander, Pa.

PRESERVE

Eggs For Winter.

Experience has proved that Water Glass is the most satisfactory material for preserving eggs. No change in the quality of the eggs at the end of a year. For prices and other information write to J. B. WEEMS, Crewe, Va.

Chicken Cholera

Sure cure and sure preventive for a mere pence. A little in their drinking water does the work. Makes chickens healthy and vigorous and keeps them laying. Can get it of any druggist. Fear cholera no more by keeping this grand chicken tonic. Send 5c. today and the remedy is yours forever. Address C. R. DALBEY, Washington C. H., Ohio.

In writing mention Southern Planter

"THE THREE MOST BEAUTIFUL ROSES."

By Paul de Longpre.

An exquisite reproduction of a remarkable painting practically given away.

At the urgent solicitation of the Woman's Home Companion, Mr. Paul de Longpre, who is the greatest painter of flowers in the world, consented to make a painting of what he considered "The Three Most Beautiful Roses," and the painting is without doubt one of the masterpieces of this great artist. This magnificent picture is reproduced in all its original grandeur on the cover of the Woman's Home Companion for June. Although this cover is an accurate reproduction of a painting worth hundreds of dollars, yet the June number, which has this exquisite cover, may be obtained at any first-class news stand or direct from the publishers for the trivial sum of only ten cents.

Mr. Paul de Longpre is justly styled the "King of Flower Painters." He not only paints roses, but every flower that grows, and is the highest authority on flowers. His paintings are found in the most select homes. Some have sold for as much as seven thousand five hundred dollars (\$7,500.00).

Artists, art critics and competent judges all agree that the covers of the Woman's Home Companion far excel those of any other magazine.

The Woman's Home Companion is a magazine which in beauty and excellence, art, stories, illustrations and fashions, etc., excels all other home and family magazines. The Woman's Home Companion is published by The Crowell Publishing Company, New York city, also Chicago, Ill., at one dollar a year, and is the favorite magazine in nearly half a million homes, where it is read each and every issue by three million people.

A POINTER FOR TOOL BUYERS.

There is probably nothing in which quality is more important than in tools. Yet the quality of a tool is not apparent to the eye, and even the experienced buyer must take chances unless he relies upon a brand which guarantees reliability.

But there is no need for any one to buy any kind of tool blindly. The Keen Kutter brand which has represented the standard of America for 36 years, covers every kind of tool.

By simply keeping in mind when buying, the name Keen Kutter, any one may buy any sort of tool with full assurance of lasting satisfaction.

The Keen Kutter line of tools was awarded the Grand Prize at the World's Fair, St. Louis. This is the only award of the kind ever made to a complete line of tools.

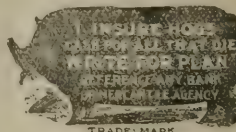
If your dealer does not keep Keen Kutter Tools, you may make sure of being supplied by writing to the Simmons Hardware Company, St. Louis, or 298 Broadway, New York.

FREE

TRIAL FOR 30 DAYS

Any reader of this paper remitting direct to me for a can, or half can, of my Hog Remedy at below prices, and giving same a fair trial for 30 days, may at that time have his money refunded if he is not satisfied that his hogs have been benefited; that I will do all that I claim for it, and that it is the best hog remedy he has ever used.

CASH FOR HOGS THAT DIE.



Dr. Haas' Hog Remedy

PREVENTS AND ARRESTS DISEASE, STOPS COUGH, EXPELS WORMS AND PAYS FOR ITSELF MANY TIMES OVER WITHOUT EXTRA FEED. It is the pioneer and peer of all preparations on the market for hogs—28 years' success.

Prices: 25-lb. can, \$12.50; half can (12½ lbs.), \$6.50, prepaid; packages, \$2.50, \$1.25 and 50 cents each. None genuine without my signature on package or can label.

HOG BOOK FREE

Latest revised edition. "Hogology," my book about hogs, will be sent FREE if you mention the Southern Planter when asking for it. Many new and important subjects have been added and every phase of swine raising, from start to finish, is covered in a thorough and practical manner.

WONDER VERMIN KILLER

kills lice and vermin on poultry and stock; 25 cents per box; mailed, 35 cents.

JOS. HAAS, V. S., Indianapolis, Ind.

Italian Bees.

The kind that do the hustling. Guaranteed to work on Red Clover. Spring Colonies furnished at \$5 each f. o. b. cars here, in your choice of Root or Dazebaker hives. The best comb honey hive on earth. Also Root's hives and supplies at Root's prices. Catalogue for the asking. Write me anything you wish to know about bees and their management.

J. E. Thomasson,
Bumpass, Va.

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Old field pine made to last longer than cedar or locust by creosoting with dead oil of coal tar. The creosoting of lumber makes it practically indestructible, stops all rot and is absolute death to all insects. Write for prices to the NORFOLK CREOSOTING CO., Norfolk, Va."

STOCK SHEEP



ANNOUNCEMENT.

My first consignments of **STOCK SHEEP** will arrive about July 1st, and from that time till late fall, I will furnish them in ANY NUMBER to buyers at reasonable prices. Send your orders early as I shall fill all orders in rotation.

Write for my Free Catalogue on the Sheep I handle; this explains everything.....

If you have any kind of Live Stock to sell, write me. I can sell it for you.

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Commission Salesman of Cattle, Hogs, Sheep, Lambs and Calves.

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Office Phone 82. Residence Phone 5054.

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DORSET RAM

purchased from V. P. I. flock, for sale to avoid inbreeding. Apply to T. J. FITZGERALD, Chatham, Va.

WANTED

20 VERY LARGE EWES

(Grade or Pure Bred.)

Not over 4 years old. State price. C. T. BETHELL, News Ferry, Va.

GOOD HOUSEKEEPING.

Old Virginia Muffins.

Scald a quart of new milk and let it cool, then stir into it slowly a quart of flour, a teaspoon of salt and a half cup of yeast, and add last three eggs beaten light without separating. Set it to rise and keep it cool (in summer). Let it rise about eight hours and when light stir into it a large spoon of melted butter. Bake in gem pans or muffin rings.

Sally Lunn.

Three pints of flour, four eggs, a small cup of yeast, one cup of lard and butter mixed, teaspoon of salt and as much milk as will make a stiff batter, beat all very hard and set in a cool place to rise. When it is light put it in your cake pan and let it rise again. When nearly to the top of the pan put it into the oven and cook quickly.

Waffles.

One cup of corn meal, one quart of flour, four eggs beaten light, one quart of butter milk or clabber, one teaspoon of soda, a tablespoon of melted lard added last. Always dissolve the soda in hot water. Grease the waffle irons and keep them very hot.

Soft Batter Bread.

One quart of milk, one pint of meal, three eggs beaten light, a large spoon of lard, and if you have it a cup of cold boiled rice. Stir all well together, adding a teaspoon of salt and bake in a deep pudding dish.

Green Pea Soup.

Put one quart of peas, and half of a chicken and a slice of ham, into a sauce pan, with two quarts of water and boil till the peas are tender. Pass them through a collander or potato masher. Season with pepper and salt and return to the fire. Just before serving add a tablespoon of butter in which a heaping tablespoon of flour is creamed. Let it boil up once and serve very hot with toasted bread.

Cat Fish Chowder.

Only our friends who are so fortunate as to live in the New River country can enjoy this in its best form.

Wash the fish in warm water and soak it in sweet milk for an hour to take away some of the mud taste. Put it on in just water enough to cover it and boil until tender, and the bones will slip out. Take out the largest bones and chop the fish, put it into a stew pan with a pint of water and a large piece of butter. Add a cup of cream, pepper and a very little salt, one small onion chopped, one teaspoon of mustard and a half cup of walnut catsup. Stew until it thickens. Garnish with curled parsley and sliced lemon, with rings of the whites of hard boiled eggs, serve hot with toast.

To Boil an Old Ham.

The ham should be washed and scraped and dried well the day before it is boiled. The night before put it into a tub and cover with water and soak all night. Put into the ham



COOPER SHEEP DIP

Standard of the World

for 60 years. Used on 250 millions annually. **One dipping kills Ticks, Lice and Mites.** Kosmell. Keeps flock clean a long time. Increases growth of wool.

Dipping Tanks at cost.
Send for Pamphlet to Chicago.
If local druggist cannot supply send \$1.75 for \$2.100 gal. / \$1.50 for \$2.100 gal. / \$1.50 for \$2.100 gal.

JOHNSON & STOKES, Phila., Pa. G. A. KELLYCO.
Pittsburg, Pa. Cyril Franklyn, 72 Beaver St., N.Y.

Stock For Sale.

7s and 15-16 GRADE ANGUS Bull and Heifer calves, \$25.00 to \$50.00 each.

1 BULL CALF out of Shorthorn Cow, by Angus Bull, \$50.00.

1 splendid dark bay mare 7 years old, perfectly reliable everywhere, weight 1100 lbs. Price, \$150.

1 pair of BROWN GELDINGS, coming four years, well matched, well broken and well grown for their age, a first class allround farm and driving team, perfectly reliable, price \$350.

Several fine family milk cows, fresh, price \$50.00 to \$60.00 each.

WHITE PLYMOUTH ROCK and SILVER LACED WYANDOTTIE eggs, \$1.00 for 15.

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FOR SALE.—I offer 200 pairs select birds, bred from choice, imported stock. None better. Write at once. S. M. GEYER, Burkeville, Va.

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Duroc Jerseys

PAUL J. 21625, heads the herd, with such sows as JULIE'S PET, 0474, BELLE OF SALT POND, 70454, and LADY OF VIRGINIA, 70456. Young stock for sale. S. A. WHITTAKER, Hopedale, Va.

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DUROC JERSEY PIGS.

When buying breeders, get the best or none. I would like to ship you a pair of these pigs, at eight weeks old for \$15. or \$10 each, with the understanding that if you are not thoroughly satisfied they may be returned at my expense. J. E. THOMASSON, Bumpass, Va.

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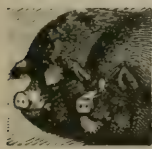
Shropshire Buck

for sale. G. B. STEPHENS, Birdwood, Va.

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Berkshires

for present and future delivery, for sale. My HIGHCLERE Sow has a fine litter; my great grand daughter of LOYAL BURGESS is due to farrow in a few days, while my grand daughter of MANOR FAVORITE will farrow in a month. My imported COLAMBIA, a son of the great English Boar, FIRST CATCH F, and a full brother to JULIUS CAESAR, is the sire of all. Don't fail to book your order at once for some of this great blood. I assure you that prices will be right. F. M. HODGSON, West End, Va.



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Our imported boars, HIGHTIDE ROYAL, VICTOR and ROYAL HUNTER won first at English Royal and Virginia State Fairs, respectively. In 1901, Nine rosy-bred imported sows, and animals com-

bining the blue-t blood of England with that of American champion.

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I offer some exceedingly fine young boars for sale; by Imported Danesfield Tailor, 76910 and out of Biltmore bred sows. It will be hard to find better or cheaper stock.

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Berkshires.



All sow pigs sold, but have a few more 3 months old Boars left. Sired by MANOR OF BILTMORE, IL 86548, and out of registered sows; all pure Biltmore blood. Four pretty pups from my pure bred SMALL BEAGLE HOUNDS for sale.

ROBERT HIBBERT, Charlottesville, Va.

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Berkshire Pigs.

We have a few first class young boar and sow pigs for sale. Write for prices. HOLLYBROOK FARM, P. O. Box 330, Richmond, Va.

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Full blooded Berkshires ready for service, at farmers prices.

REG. JERSEY BULL

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Berkshire Pigs

Hawley Stock Farm has them of the best breeding; fine individuals. J. T. OLIVER, Prop., Allen's Vale, Va.

OPIUM

and Whiskey Habits cured at home without pain. Book of particulars sent FREE. R. M. Woolley, M. D., Atlanta, Ga., 163 N. Pryor St.

boiler with the skin down and cover with cold water, let it boil slowly, fifteen minutes for every pound the ham weighs. When perfectly done set the boiler aside with the ham in it and let it cool off in the water. Carefully remove the skin, sprinkle with cracker crumbs, pepper and horse radish, and bake slowly for an hour.

Tyler Pudding.

Six eggs beaten separately, four and a half cups of sugar, one and a half cups of butter, one and a half cups of cream or rich milk, one teaspoon of extract of lemon, half a nutmeg. Cream the butter and sugar together, adding the yolks and then the cream, lastly the whites and bake at once in rich pastry.

Butter Pudding.

Make a batter of three teaspoons of flour and six of milk. Beat six eggs separately, add all together and add two tablespoons of melted butter and a pinch of salt. Butter your pudding dish and bake quickly. Serve with wine sauce.

Wine Sauce.

Cream a cup of butter until light, then beat into it three cups of sugar and a cup and a half of some good wine. Put all together in a double boiler, or a tin cup set in a pan of hot water and shake constantly until it foams and is boiling hot.

Spice Cake.

The yolks of eight eggs beaten to a foam, five cups of flour, two cups of brown sugar, one cup of syrup or molasses, one cup of butter, one teaspoon of soda, and two of cream tartar, two teaspoons each of powdered all spice, cinnamon, cloves, one of ginger and a little nutmeg. Mix the spice in the flour and cream the butter and sugar and eggs together. Add the flour last and bake in sheets.

CARAVEN.

Knox county, Tenn., Mar. 8, 1905.

The Southern Planter is quite valuable to me in my business, and I use it for reference quite often. It is my standard when I need information.

Geo. H. KITCHEN.

ENTIRELY SATISFACTORY.

Wildor, Vt., Oct. 6, 1904.

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Gentlemen:—Some three years ago I bought some Page Fence, putting part of it up along the road, in front of my house, and it has attracted a great deal of attention. It is just as good to-day as it ever was, and is entirely satisfactory. It turns everything and stays right there.

C. D. HAZEN, JR.

Davidson Co., N. C., 3-15-'05.

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P. NORTON.

POLAND=CHINA PIGS.

Some fine ones young sows, bred, young boars and pigs. No better breeding in the United States. My herd boars have been sired by J. H. Sanders, Lookover, Perfect I Know, Proud Perfection, Corrector, and High Roller, the greatest prize winners of the breed—my sows have been as carefully selected.

RED POLLED CATTLE. Fine, good young bulls. Will sell a few cows and heifers. ARROWHEAD STOCK FARM, Charlottesville, Va., SAM'L E. HINDS, Propr.



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Sunshine and Free Coinage Blood.

Choice 2 1-2 months pigs. Either sex—ready for shipment, \$5 each. Eligible to registry and guaranteed O. K. Buy the best, it pays to do so. E. T. ROBINSON, Lexington, Va.

Orchard Hill Pure-Bred

POLAND-CHINAS.

2 brood sows bred and some nice 2 mos. old pigs for sale; also 2 fine GUERNSEY BULL calves, whose grand dams stood the advanced Registry test of 348 pounds or more in 1 year. F. M. SMITH, JR., R. F. D. 4, Charlottesville, Va.

POLAND-CHINAS

with the BUSINESS HAMS.



Large, mellow, easy keepers. Bred right and sure to please. SUNSHINE, T. H. PERFECT and TECUMSEH blood. A few Spring pigs of both sexes, eligible to registry, for sale. M. B. Turkey eggs, 32 per dozen. W. M. GRAHAM & SONS, Overton, Albemarle county, Va.

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Essex and Poland-China Pigs.

I have on hand some fine Essex pigs (sows only, 8 weeks old) ready for delivery by May 1st; also a few Poland-Chinas for June delivery. Southdowns for June and July delivery. Your orders solicited. I. G. JONES, R. F. D., 1, Tobaccoville, N. C.

Registered P. China

C. Whites. Large

strain. All ages mated not asking 8 week pigs. Bred sows, Service boars, Guernsey calves, Scotch Collie pups, and Poultry. Write for prices and free circulars.

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Chester White Hogs,

Best hog on earth at farmer's prices. S. M. WISECARVER, Rustburg, Va.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

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None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$25. Heifers, same age, \$25. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

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Jersey Heifer

Calves 4 to 6 weeks old at \$15 each, or will sell in lots of 5 for \$60. A. R. YENABE, JR., Box 147, Farmville, Va.

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Hereford Bull

3 years old, for sale. Has all typical markings in color and form; remarkably sure in stamping his characteristics on all his get; a great bargain is offered for prompt sale. Also a FOUR-HORSE SWEEP POWER, nearly new, at less than half first cost. Call on or address J. T. NICHOLAS, Barboursville, Va.

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BULLS and HEIFERS.**

**Hampshire Down Sheep,
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calves from fine milking stock.

Yorkshire Pigs

of prolific breed.

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REPORTS.

Colorado Experiment Station, Ft. Collins, Col. Classified list of bulletins.

Bulletin No. 96. The Shade Trees of Denver.

Bulletin No. 97. Feeding Steers on Sugar Beet Pulp, Alfalfa Hay and Farm Grains.

Bulletin No. 98. Beet Worms and their remedies.

Cornell University, Ithaca, N. Y. Bulletin No. 228. Potato Growing in New York.

California Experiment Station, Berkeley, Cal. Bulletin No. 165. Asparagus and Asparagus Rust in California.

Idaho Experiment Station, Moscow, Idaho. Bulletin No. 48. Animal Husbandry. Feeding Calves on Separator Milk.

Kansas Experiment Station, Manhattan, Kan. Bulletin No. 127. The Roots of Plants.

Bulletin No. 128. (Ft. Hays Branch) Experiments 1902-'04.

Press Bulletin No. 140. Egg Laying Contest.

Report of State Board of Agriculture, quarter ending March, 1905. F. D. Coburn, Sec'y, Topeka, Kan.

Michigan Experiment Station, Agricultural College, Mich. Bulletin No. 223. Part I. Equipment for breeding, feeding, care and management of swine. Part II. Preliminary report on forage crops for swine.

Minnesota Experiment Station, St. Anthony's Park, Minn. Bulletin No. 89. Soil Investigations.

Bulletin No. 90. Heavy and Light Weight Grains, etc.

Bulletin No. 91. Poultry Culture in Minnesota.

Nebraska Experiment Station, Lincoln, Neb. Bulletin No. 88. Apple Scab and Cedar Rust.

New Hampshire Experiment Station, Durham, N. H. Bulletin No. 118. Tile Drainage.

Bulletin No. 119. Forestry.

New Mexico Experiment Station, Mesilla Park, N. M. Bulletin No. 52. Onion Culture.

Ohio Experiment Station, Wooster, O. Bulletin No. 156. Tobacco Diseases; Tobacco Breeding.

Bulletin No. 160. The Codling Moth. South Carolina Experiment Station, Clemson College, S. C. Bulletin No. 102. Experiments with Forage Crops.

Bulletin No. 105. Analyses of Cotton Seed Meals.

Bulletins Nos. 108, 110, 111, 112, 113. Analyses of Commercial Fertilizers.

Virginia Experiment Station, Blacksburg, Va. Bulletin No. 153. The Horn Fly.

Farmer's Bulletin No. 4. Corn Growing in Virginia.

Wyoming Experiment Station, Laramie, Wyo. Bulletin No. 63. Native and Introduced Saltbushes.

Bulletin No. 64. Feeding Experiments with Lambs.

... Registered ...

Aberdeen Angus,

Bull for sale. A splendid animal, all right in every way, fit to head any herd. For price and breeding, address L. G. JONES, R. F. D. 1, Tobaccoville, N. C.

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**ABERDEEN-ANGUS
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FOR SALE—Registered Bull calves from 3 months old, up.

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Choice males suitable for heads of most select herds. Send for printed description.

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Top notch young registered Bulls our specialty. A few heifers to offer with bull not skin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS, Jefferson, Va.

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SHORTHORNS**

Young stock for sale, sired by ROYAL CHIEF. He by Imported Royal Stamp, Champion of Ohio 1904. POLAND CHINA pigs sired by Coler's Perfection. Write your wants, WM. T. THRASHER, Springwood, Va.

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**Thoroughbred Horses
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**Pure Southdown Sheep
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FOR SALE. R. J. HANCOCK & SON,
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**Berkshire Boars,
Dorset Buck Lambs,
Jersey Bull Calves.**

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

Scotch Collies

Champion blood of England and America. Puppies now ready to ship. Also bitches in whelp for sale. FARMVILLE COLLIE KENNELS, Farmville, Va.

SOUTHERN POETS. ARTICLE 5.

By Mary Washington.

Henry Timrod was born at Charleston, S. C., December 8th, 1829. His father, a well-to-do bookbinder, with poetic tastes, died in Henry's childhood. After some preliminary training in his native city, young Timrod entered the University of Georgia, but ill health compelled him to leave before he had finished his course. The study of the law proved uncongenial to his poetic temperament, and he became a teacher. His earlier poetic pieces appeared from 1849 to 1853 in the Southern Literary Magazine, and the short lived *Rupell's Magazine* (both of Charleston, C. C.), and attracted considerable local notice. In 1860, he brought out a small volume of poems through Ticknor & Fields, of Boston. His feelings were intensely Southern, and he wrote some of the most impassioned poems that the war called forth, "A Cry to Arms," "Carolina," "To the Unknown Dead," and "Carmen Triumphale," and others of the martial order.

For some time Timrod was war correspondent for the "Charleston Mercury." In 1863 he removed to Columbia where he became editor and part proprietor of "The South Carolinian." In 1864, he married Miss Kate Godwin. On the entrance of Sherman's army into Columbia, his office, printing press, etc., were demolished, and himself ruined, one of the numerous instances in which the enemy seemed to bear a special spite against such literary effects and apparatus as they found on their route. He wrote his friend, Paul Hayne, in March, 1866: "My story for the last year is beggary, starvation, death (he had lost a child), bitter grief and utter want." Except in the case of Edgar Poe, I do not know of a poet who had a more woeful fate. For a time, he wrote editorials for "The Carolinian," of Charleston, and was glad to act as temporary clerk to Governor Orr. In 1867, owing to failing health, he accepted on two occasions the invitation of Col. Hayne to visit him at his quaint home in the pine woods of Georgia. Hemorrhages drove him back to his home in Columbia where he died, October 7th, 1867, even at an earlier age than Edgar Poe. In 1873, an enlarged edition of Timrod's poems was published, together with a sketch of his life by Hayne, a beautiful tribute from one man of genius to another. Longfellow prophesied, "The day will surely come when Timrod's poems will have a place in every cultivated home in the United States." Gen. Buell pronounced his poem, "A Cry to Arms," "a battle strain throughout which deserves a high place up on the roll of American poems." The Century Magazine spoke of him in the following terms: "Approaching him, we suspect provincialism, but find a genuine breadth that surprises us. His gamut of feeling is wide and even in his war songs, where one expects little restraint, we find admirable self

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500 bus. mixed peas, - \$1.20
200 bus. Brown eyed white

peas, - - - - - 1.20
50 bus. Black peas, - - - 1.60
200 bus. clay peas, - - - 1.80
200 bus. soja beans, - - - 1.85
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All f. o. b. Hickory; re-cleaned and sacked in new, evenweight sacks. Can give quick shipment on these peas as long as they last.

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Improved Peach Blow, Late Seed Potatoes

for sale at \$2 per barrel f. o. b. here. The best drouth resisting sort known here. I made 340 bushels on two acres last year, planted July 8th. Pure bred BARRED PLYMOUTH ROCK eggs at \$2.50 per 100. A few pounds EVERGREEN BROOM CORN of my own raising at 15c. per pound. All orders promptly filled. J. M. HUGHES, Riverview Farm, Claremont, Va.

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DIGGS & BEADLES,
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Claremont Peach Blow

SEED POTATOES: 10 bbls. of the former and 10 bbls. of the latter for sale at \$2 per bbl. Both varieties unsurpassed. Order quickly. CHAS. G. DEISSNER, Wiedman, Va.

Late Seed Potatoes,

IMPROVED CLAREMONT PEACHBLOW, the best and surest crop potato grown in this latitude. Grown by me for the last fifteen years. Buy of the original introducer at wholesale price, 100 bushels on hand and for sale at \$1.50 per barrel f. o. b. here.

O. D. BELDING, Claremont, Va.

control and breadth. Now that the people of the South are raising a memorial to Timrod's name, the suggestion seems a proper one that the American people share in the honor, for he was a true American poet, and worthy to stand in the narrow space that belongs to the best."

Amongst the numerous poets to whom South Carolina has given birth, none was more esteemed in his day and generation than Augustus Julian Roquer, of Charleston, S. C. He was of French descent, as his name indicates, and was born about the year 1820. He was educated in Charleston and admitted to the bar at 19. During the Civil War, he held the position of Attorney General for Alabama. After the close of the war, he moved to New York, and practised law there. About forty years ago, Roquer was considered by Southern critics to be the finest and ablest poet of the South, though since then, his glory has been eclipsed by that of Timrod, Hayne and Lanier. I don't know if he was ever largely read, but he appeared strongly to a select audience of thoughtful and cultivated people, and was pronounced by competent critics to have more ideality, more philosophical art, and elevated range of thought than any poet of his day. He had a metaphysical turn of mind, like Shelley, which prevented him from being a favorite with the general public.

Of his longer poems, four deserve especial notice: "Crystalline," "The Legend of Tremaine," "Ode to Shakespeare," and "Ode to Victory." "Crystalline" is perhaps his "chef d'oeuvre," although it was his initial poem. Under the guise of a fictitious narrative, it is, in reality, a presentation of the most theological principles laid down by Emanuel Swedenburg in regard to the creation of the universe. Roquer was a partial receiver (if no more) of the teachings of Swedenburg, and these gave decided tone and color to some of his poems. Indeed there could be no fairer or more favorable field for the poet than the doctrine of correspondences which touches of the immutable analogy or relations between all things spiritual and natural, so that the latter are but the symbols or shadows of great spiritual realities.

"The Legend of Tremaine" was written for the English press just before the close of the war, and is the author's most purely ideal work, and for this reason, it is beyond the sympathy, range and intelligence of the masses. His "Ode to Victory" was written early in the year 1862. It was the author's most elaborate production, and in artistic finish was not surpassed by any poem of the war. His theme was the then new nationality of the South, its opening struggles, baptisms of blood, several triumphs and high hopes. In pathetic contrast to this is his poem entitled "Ashes of Glory," written after the culmination of the struggle.

Dr. John Dickson Bruns was born in Charleston, S. C., in 1836. He was

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... SUNNY HOME HERD ...

Aberdeen Angus Cattle

of the better sorts. HARRY ROSEBOY, 57606, by the greatest sire of herd bulls ever in America—viz., Gray Blackbird and Jester, 06071, by imp. Equester, in service. Judge John S. Goodwin, who bred "Jester" has the following to say of imp. Equester (of Chicago). "Equester was imported by me and sired some very good calves. He was a son of Equestrian, which was the best bull Scotland had produced for many a day. Equestrian was one of the few bulls which beat Prince of Wales. I think I am correct in saying that Equester has probably more Irish blood than any bull of that family imported in recent years. My recollection is that he had over 51 per cent. He was the best around the heart of any Angus bull I ever saw. In fact, he was about perfect in that respect. He was of good disposition and an easy keeper." The bull is half the herd. Write A. L. FRENCH, Proprietor, R. F. D. 2, Hyndsville, Va. Farm at Fitzgerald, N. C.

WE ARE STILL IN THE BUSINESS

"HILL TOP" STOCK at Shadwell, Va.

Southdown and Shropshire Sheep, Berkshire Hogs,

B. B. R. Game Chickens, Fox and Deer

Hound Puppies.

We now have very few Berkshire pigs, but what we have are the right kind. Have only a limited number of sheep for sale. Have young hounds of Walker Strain, and a few young ones of Virginia families, that have speed, and the staying qualities. We are hunters and know what good ones are. We have won more premiums on sheep and hogs at State and County Fairs, than all other breeders in Virginia, combined.

H. A. S. HAMILTON & SONS, Shadwell, Va.

When corresponding with our advertisers always mention SOUTHERN PLANTER.

educated at the Charleston College, and in his junior year, took a prize in composition and elocution. In his senior year (1854) he graduated with the first honors, and took the golden medal for oratory. He then studied medicine, in which he graduated in 1857, and became eminent in his profession. He was a man of varied gifts, and of great culture both in English and Latin classics. He was a fine scholar, a good poet, and also an able writer on professional subjects. He wrote a large number of lyrics and a good many occasional poems. He was the editor of the Charleston Journal from 1859 till the beginning of the war. After the war, he became professor of physiology and pathology in New Orleans.

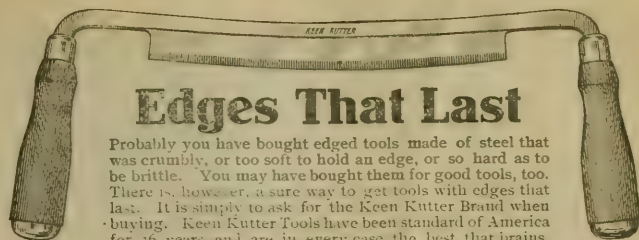
James Ryder Randall was born in Baltimore, January 1st, 1839. His lineage was French and English, with a dash of Irish. He received a good classical education at Georgetown College, a Catholic institution. When quite a young man, he went to Louisiana, and for some time edited a paper at Point Coupee. From there he moved to New Orleans where he was engaged on the Sunday Delta. He is chiefly known as the author of "Maryland, My Maryland," a song which had an immense vogue during the Civil War. It was published in Baltimore in April, 1861, the air being that of an old German Burschen-lied, beginning: "Oh Tannen Baum! Oh, Tannen Baum!

Wie grun sind deine Blatter."
Amongst Randall's other poems are: "Fort Pillow," "The Lone Sentry," "John Pelham" (one of the best Southern war songs), "Stone Apples," "A Sunday Reverie," "Magdalene," "Edolon," "The Cameo Bracelet."

He wrote "Edolon" and "The Cameo Bracelet" on the occupation of New Orleans by the Federals in 1862. A few months later, we find him assigned to duty in Augusta, Ga., where he wrote, "There's Life in the Old Land Yet" and "Battle Cry of the South." Later he was on duty at Wilmington, but at the close of the war, went again to Augusta where he became associate editor, and afterwards (1866) chief editor of "The Constitutionalist."

WASHINGTON NOTES.

The forthcoming annual year book of the Department of Agriculture will contain an unusually good selection of popular and instructive articles on farming, fruit raising and live stock growing. For many years this annual "blue book" of the Agricultural Department was a dry, decidedly uninteresting affair which, though widely distributed by Congressmen and Senators, usually found its way onto the farmer's mantel piece or shelf, where it rested forever afterward comfortably and undisturbed. Of late years, however, this volume has been much more widely read and in fact always contains a number of articles well worth careful perusal.



Edges That Last

Probably you have bought edged tools made of steel that was crumbly, or too soft to hold an edge, or so hard as to be brittle. You may have bought them for good tools, too. There is, however, a sure way to get tools with edges that last. It is simply to ask for the Keen Kutter Brand when buying. Keen Kutter Tools have been standard of America for 36 years, and are in every case the best that brains, money and skill can produce. They are made of the finest grades of steel and by the most expert tool makers. As a complete line of tools is sold under this brand, in buying any kind of tool all you need remember is the name

KEEN KUTTER

The draw knife shown here is an example of the excellence of Keen Kutter Tools. It has a nicety of balance and "hang," which has never been successfully imitated, and it is made of the best steel ever put into a draw knife. In all the years that we have sold this tool we have never heard of one defective in any way.

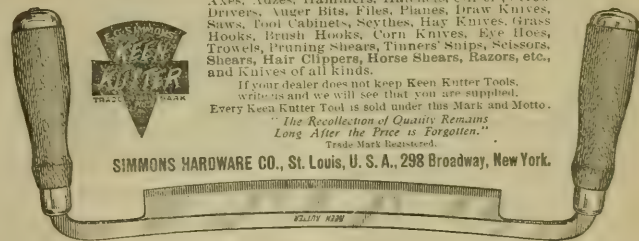
Yet the Keen Kutter Draw Knife is no better than all other Keen Kutter Tools.

The Keen Kutter Line was awarded the Grand Prize at the St. Louis Fair, being the only complete line of tools ever to receive a reward at a great exposition.

Following are some of the various kinds of Keen Kutter Tools: Axes, Adzes, Hammers, Hatchets, Chisels, Screw Drivers, Auger Bits, Files, Planes, Draw Knives, Saws, Tool Cabinets, Scythes, Hay Knives, Grass Hooks, Brush Hooks, Corn Knives, Eye Hoes, Trowels, Pruning Shears, Tinners' Snips, Scissors, Shears, Hair Clippers, Horse Shears, Razors, etc., and Knives of all kinds.

If your dealer does not keep Keen Kutter Tools, write us and we will see that you are supplied. Every Keen Kutter Tool is sold under this Mark and Motto.
"The Recollection of Quality Remains Long After the Price is Forgotten."
Trade Mark Registered.

SIMMONS HARDWARE CO., St. Louis, U. S. A., 298 Broadway, New York.



GLEN ALLEN STOCK FARM, Breeder of Aberdeen Angus Cattle.

"The Bulls that have made Glen Allen Famous."

Herd headed by ALLENHURST KING 4, No. 47199, son of McHenry Blackbird 20th, 32499, assisted by POLLY'S ITO, 73790, son of Prince Ito, 50006, the famous \$9,100 bull.

Young Bulls for sale at reasonable prices, fit to head the best of herds, regardless of price or breeding.

W. P. ALLEN, Proprietor,
R. F. D. No. 1, Ewing, Va.



ANGORA GOATS.

We have just imported over 300 fine Angoras from New Mexico. We have Angoras from Oregon, Texas, California and New Mexico.

DIAMOND V RANCH,

Rock Castle, Va.

Among articles of general farm interest in this year's issue will be General Farming, by W. J. Spillman, the chief of the Division of Grasses.

Forest Planting and Farm Management, by George L. Costello, of the Bureau of Forestry.

Practical Road Building, by S. C. Lancaster.

Promising New Fruits, by W. A. Taylor, assistant pomologist.

Boys' Agricultural Clubs, by Dick J. Crosby.

Some Benefits the Farmer May Derive from Game Protection; and Animal Industry, by the editor. Salmon.

Other articles of more special or local interest are:

Inspection of Foreign Food Products, by Dr. H. W. Wiley, chief chemist.

Potato Culture near Greeley, Colorado.

Improvement of Tobacco by Breeding and Selection, by A. D. Saamel.

Annual Loss Occasioned by Destructive Insects, by C. L. Marlett, assistant entomologist, Sugar Beet Seed Breeding, and other articles.

The volume also contains a number of reports on legislation and appropriation affecting good roads, agricultural and horticultural organizations and reports on the various investigations in forestry, forest plants, fruit growing, plant diseases, diseases of domestic animals, irrigation and drainage, sanitary work as affecting live stock, and protection against live stock contagion and agricultural experiment station work.

An article on the detection of cotton seed oil in lard may interest the housewife.

A rather unusual article to appear in the new year book of the Department of Agriculture is entitled The Weather Bureau and the Home-seeker. It undertakes to show that it is a matter of the greatest importance to settlers who contemplate moving into a new locality to have information relative to the climatic conditions there existing, so that he may determine whether or not the change will be advantageous and may make his plans to meet the new conditions and turn them to his profit. A source of such information is to be found in the reports issued by the Weather Bureau. The author of the article believes that the climatic and crop service of the Bureau is of as much importance as the forecasting branch and of the 190 regular stations of the Weather Bureau throughout the country, 45, covering all the States, are designated as climatic and crop service centers. From the information received from the thousands of crop correspondents of the Bureau weekly crop bulletins are prepared and published. These are issued free of cost to all who desire them, and the information which they contain forms an excellent basis upon which to determine the agricultural products which can be successfully grown in any locality. The various crop publications, according to this article, are



ACTOR 26TH, 136228.

INGLESIDE HEREFORDS.

Owued by S. W. Anderson, Blaker Mills, Greenbrier county, W. Va.

A choice lot of BULLS, COWS and HEIFERS for sale. Also a few POLLED HERFORD BULLS recorded in the National Polled Hereford Records. Write for catalogue and prices. Farm near Alderson, W. Va., on the C. & O. R. R. Telegraph and Telephone office, Alderson, W. Va.

Bacon Hall Farm.
Hereford Cattle -:- Berkshire Hogs
REGISTERED—ALL AGES.
DORSET RAMS.
Toulouse Geese, Muscovy Ducks.
MOTTO: Satisfaction or no sale.
E. M. GILLET & SON, - Glencoe, Maryland.



Grand Champion Prince Rupert, No. 79539.

Registered Hereford Cattle and Berkshire Hogs.

EDWARD GAY BUTLER, Anselm Farm, Berryville, Va.

Hereford Herd headed by Prince Rupert, No. 79539, whose son, Prince Rupert, 8th, won first prize in the 2-year-old class at the recent Chicago International show.

Berkshire Herd headed by Baron Premier, No. 55227, whose son "Admiral Schley" won first in the 6 to 12 months class at the International Show, 1902.

Young stock both calves and pigs for sale at reasonable prices.

CORRESPONDENCE INVITED.

HEREFORDS THAT ARE HEREFORDS

ACROBAT the greatest living Hereford sire, stands at the head of the most select collection of breeding cows in the South and East. Write for our Hereford History, Herd Catalogue, and large picture of ACROBAT. We have sold this month fine bull calves to Virginia and South Carolina, and one to Brazil, South America. Discriminating buyers get their breeding stock from Rosemont. There's a reason. We want to sell some nice bull calves to our Southern friends, and if they buy now, we are going to keep their purchases until fall for shipment. This is very liberal on our part, which we know will be appreciated by our friends south of the fever line. We also breed HACKNEY HORSES, BERKSHIRE HOGS and WHITE WYANDOTTE FOWLS. Let us hear from you. ROSEMONT FARM. We lead, others follow. Berryville, Clarke county, Va.



HEREFORDS (ENTIRE HERD) DORSETS (ENTIRE FLOCK)

A prompt buyer will get a bargain. H. ARMSTRONG, Lantz Mills, Va.

EDGEWOOD STOCK FARM. DORSETS.

Our FALL LAMBS are here, friends, and they are crackcracks. Our Imported Ewes started lambing October 16th. Better give us your orders now. Last year many of you were too late.

J. D. and H. B. ARBUCKLE, Maxwellton, Greenbrier, Co., W. Va.



constantly consulted by home-seekers, although not to the extent which the settlers' interests would warrant.

Lovers of dumb animals can find much satisfaction in the statement made in a report which has been republished by the Bureau of Animal Industry that in the housing and general care of dairy cows no foreign country shows, as a rule, in general practice, any methods or conditions better than those found in America. The average conditions everywhere are bad enough with opportunities for great improvement; but such improvement is being made as rapidly in the United States as anywhere. Nowhere else it is stated, is there a better appreciation of the importance and economy of abundant room, light, air, drains, comfort, cleanliness for cows. We hear much of the close relations between the dairy cows and the homes of their owners in Holland and Switzerland, connecting apartments, under the same roof, etc.; but the stables which are seen in the summer by tourists, converted into conservatories and rooms for weaving and cheese curing are the exception and show places. Even the best of these, when visited in mid winter, with the cattle in place, are often found dark, close, poorly ventilated, crowded and unsanitary in many respects although they may be kept clean. While the construction of cow stables generally in the dairy regions of the Old World is substantial, it is with little regard for light, ventilation and cleaning and the labor necessary to keep them in decent condition would be regarded as impossible in the United States.

Secretary Wilson is now on a tour of the States in the Southwest, making investigation of agricultural conditions in that locality. The Secretary proposes, during the trip, to make several addresses to the farmers of the Southwest, giving to them in interesting form, the results of the Agricultural Department experiments important to that section. The Secretary will include in his trip the States of Arkansas, Texas, Kansas and Indian and Oklahoma Territories.

The Department of Agriculture has received the report of an experiment made in England to determine the effects of the weather on the quality of milk. Over 1,100 samples of milk have been examined during the last three years and comparisons made with the rainfall records during the same period. While great variations were observed in different years and in different periods of the same year, the results were considered as affording no evidence whatever that excessively dry or excessively wet weather produced any influence upon the quality of milk.

The Bureau of Soils has issued its annual report and an accompanying great mass of soil survey maps of many different parts of the country covered by this system of soil analysis. The various writers of the report found many sections of the country in a lamentable condition from the stand-

LARGE YORKSHIRES.

The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times.

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

Address

BOWMONT FARMS, Salem, Va.

10 REGISTERED

JERSEY HEIFERS.

From \$20 to \$50 each.

GUERNSEY BULLS, 6 months old, \$30 to \$40.

BERKSHIRE HOGS, all ages, and Pigs not akin.

EGGS from Barred Plymouth Rocks, Brown Leghorns

and Pekin Ducks \$1' per sitting, carefully packed.

Also TOULOUSE GEESE. Eggs \$3 per dozen.

M. B. ROWE & CO., Fredericksburg, Va.

Baron Premier 3rd 75021,



the head of our herd, was first in his class at World's Fair; weighs 900 pounds at 22 months. His dam is litter-mate to Lord Premier, 50001, selling recently for \$1,500; his sire was premier champion winner at World's Fair at St. Louis. With this great hog and a large line of both Imported and American well selected sows and gilts, especially chosen to mate with him, we are actually producing and accomplishing the pleasure of breeding the most magnificent strains of BIG, LONG, WIDE, DEEP, THICK-SET BERKSHIRE HOGS on short legs.

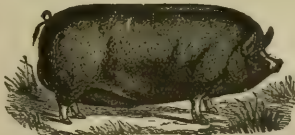
We are now offering a few bred sows and gilts and some three months pigs. It makes no difference how fine hogs you desire to purchase, you

need not go farther than

MAPLE SHADE FARM,

W. H. COFFMAN, Propr. Bluefield, W. Va.

Seven March Litters



of 65 and FIVE APRIL LITTERS of 48, with hundreds more en route, with export inquiries coming in and scores booked for the United States, is the way the Berkshire business is progressing at Fassifern; not a case of scours, thump, sore mouth or any disease in the entire lot.

A FLOCK OF PEKIN DUCKS having learned the way to a big pond where they will get shot can be bought for \$1 each; they are laying and in fine fix. First check gets them.

PIT GAME, BLACK DEVIL STRAIN, eggs, \$1 for 15. BARRED PLYMOUTH ROCK, eggs, \$1 for 15. S. C. BROWN LEGHORN, eggs, \$1 for 15. PEKIN DUCK eggs, \$1 for 12. Beautiful birds, healthy and fine fowls, mother hens at 50c. to \$1, and their young broods at \$1-3c. each. THOS. S. WHITE, Fassifern Stock and Poultry Farm, Lexington, Va.

REGISTERED POLAND CHINAS

largest strains, broad and deep, long and rangy. Choice pigs and gilts. If you need a choice young service boar, I can interest you. Remember, it is not the price, but the quality that's high. T. M. Byrd, R. F. D. 3, Salisbury, N. C.

point of economical and up-to-date agricultural practice. Many instances are noted where the farmers give the land as little preparation as possible, hoping that a favorable season with timely showers will overcome this lack of cultivation and insure good crops. Attention is called to the fact that shallow plowing and lack of after cultivation results in rapid drying out of the soil and certain crop failure to a greater or less extent. The careful farmer plows deep. The most successful farmers of the country have come to realize the value of deep plowing and thorough cultivation and are raising twice as much grain on their land as they did twenty years ago. Statistics of grain and other yields fully bear out this criticism of the Department agents. The average wheat yield of the entire United States, for instance, is less than 14 bushels per acre, a miserable yield in which there is no profit for the farmers. As large areas produce 20, 25 as high as 35 bushels per acre this means that other areas must produce far less than even 14 bushels.

Criticism is also made of the lack of rotation among many farmers and the overcropping of the soil. A regular rotation of crops, the report says, is practiced by most careful farmers and more attention to this feature and to the system of cultivation is earnestly recommended. The Department men also remark on the shiftless practice in many instances of leaving reapers and other farm implements without shelter all winter—an evil too obvious to require comment.

In 1814, the known production of coal in the United States was 22 tons; by 1850 it had increased to over seven million tons; in 1870, it was 33 million tons; in 1890 it was 157 million tons, and 1904 it was 351,196,953 tons. The total amount of commercial coal produced in the United States since 1814 has been 5,577,000,000 tons and of this Pennsylvania has produced the enormous proportion of 1,696,000,000. Her present production is about one-fifth of that of the entire United States.

GUY E. MITCHELL.

Ask your Senator or Congressman to send you a copy of the year book mentioned above.—Ed.

Pasquotank Co., N. C., Apr. 22, 1905.

I am highly pleased with the information I get from the SOUTHERN PLANTER.

S. M. BROTHERS.

THE HABIT THAT WON'T COME OFF.

Uncle Timrod Tarp—“As a man grows older he gives up his bad habits one by one.”

Deacon Kreebacker—“Wa-al, I notice they ya ain't quit yer circus-goin' habit yet.”

Uncle Timrod Tarp—“Huh! I ain't as old as all that yet, lemme say to ye!”—Woman's Home Companion.

BERKSHIRE BOAR,

FIT TO HEAD ANY HERD,

FOR SALE.

Breeding Right.

Individuality O. K.

FOREST HOME FARM, Purcellville, Va.

THE - OAKS - STOCK - FARM.

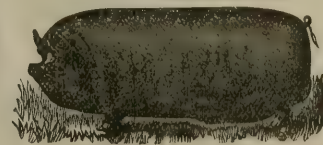
A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

We breed and ship the FINEST STRAINS of

Large ENGLISH BERKSHIRES

for less money than any firm in the South, quality considered. Every pig shipped possesses individual merit. Pedigree furnished with all stock. 200 Gallons Cider Vinegar.

ALEX. HARMAN, Mgr., Lexington, Va.



We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

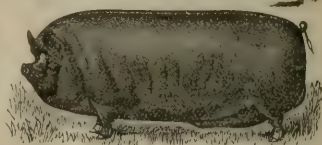
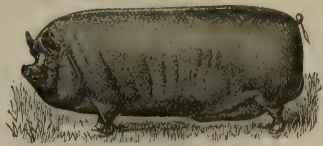
WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.

HILL TOP STOCK FARM.

I have increased, and if possible, improved my stock of royalty bred Berkshires. I defy competition either in quality or price. That superb young boar, “Shenandoah Chief,” bred by Lovejoy & Son from imported stock with CLARA BELL, CHRISTINE and other well known sows are among my herd.

Boars ready for service. Sows and pigs for sale. Write quick. S. BROWN ALLEN, Staunton, Va.



Large English Berkshires

YOUNG BOAR READY FOR SERVICE, and an EXTRA GOOD lot of Spring Pigs, offered at reasonable prices. Address

PHIL H. GOLD, Winchester, Va.

..ELMWOOD NURSERIES..

—WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF—

APPLES, PEACHES, PEARs, CHERRIES, PLUMs, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

INTERNATIONAL STOCK FOOD

FOR BOYS, GIRLS, MEN, WOMEN.

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|--|---|---|
| \$75 Cash ^{1/2} For any boy or girl under 18 years of age raising the largest calf in six months of age. | \$25 Cash ^{1/2} For anyone reporting largest number of pigs fattened by one sow, dead and alive counted. | \$25 Cash ^{1/2} For anyone reporting the largest gain for one male in any 60 days. |
| \$75 Cash ^{1/2} For any boy or girl under 18 years of age raising the largest colt or six months of age. | \$125 Cash ^{1/2} For anyone showing largest gain for one cow for 90 days or any 90 days. | \$25 Cash ^{1/2} For anyone reporting the largest gain for one male in any 60 days. |
| \$25 Cash ^{1/2} For any boy or girl under 18 years of age raising the greatest pig for any 90 days. | \$25 Cash ^{1/2} For anyone showing largest gain for two cows for 90 days or any 90 days. | \$50 Cash ^{1/2} For anyone reporting the largest gain for 25 sheep for any 90 days. |
| \$50 Cash ^{1/2} For any woman reporting largest amount of butter from one cow for any 90 days. | \$125 Cash ^{1/2} For anyone showing largest gain for one lot of hogs for any 90 days. | \$25 Cash ^{1/2} For anyone reporting the largest wool clip from five sheep. |
| \$25 Cash ^{1/2} For any woman reporting the largest amount of milk from one cow for any 60 days. | \$25 Cash ^{1/2} For anyone showing largest gain for ten hogs for any 90 days. | \$25 Cash ^{1/2} For anyone reporting the largest gain in ten sheep for any 90 days. |
| \$50 Cash ^{1/2} For any man or woman reporting largest amount of milk from 5 cows for any 60 days. | \$25 Cash ^{1/2} For anyone raising the largest hog to six months of age. | \$25 Cash ^{1/2} For anyone reporting the largest gain for five goats for any 90 days. |
| \$50 Cash ^{1/2} For any man, woman or boy raising the largest number of pigs from 5 sows to four months of age. | \$25 Cash ^{1/2} For anyone showing the greatest gain for one hog for any 90 days. | \$25 Cash ^{1/2} For anyone reporting the largest wool clip from five goats. |
| \$25 Cash ^{1/2} For any man, woman or boy raising the largest number of pigs from one sow to two months of age. | \$25 Cash ^{1/2} For anyone reporting smallest amount of grain used for a team working every day for any 60 days. | \$25 Cash ^{1/2} For anyone reporting largest number of first prizes won in 1905 for one ram. |

These premiums are open to any man, woman, boy or girl in the world on the following conditions: "International Stock Food" is to be fed to all competing animals. The time limit is, for premium animals and the tests, for any time between May 1st, 1905, and May 1st, 1906. You can select any months for your tests during this specified time. We do not require you to feed any certain amount of "International Stock Food," but leave matter of amount used to your own judgment. Feed as much of "International Stock Food" as you think will give you best paying results. If two or more competitors use the same amount of "International Stock Food" used and the result, and this statement to be signed by yourself and two witnesses. Animals competing for one prize must not be reported for any other prize. Cash prize must be paid by different animals. If any report appears to contain a self evident error, we reserve right of asking party to make a sworn statement. ^{1/2} You Must Send Us One Of The Pan Patch Colored Lithographs, Offered Free In This Page. If You Have Not Received One, We Will Like A Photograph of the animal before and after test, but we do not require it. You stand as good a chance as anyone in securing several hundred dollars in cash. The results, including name and address, will be published in all the leading "Farm Papers," having over Five Million Farmer Subscribers. Premiums will be decided by us on the written statements which will be open for public inspection at any time. The money will be divided equally. At the end of our test we require your written statement as to time you started your test, amount of "International Stock Food" used and the result, and this statement to be signed by yourself and two witnesses. Animals competing for one prize must not be reported for any other prize. Cash prize must be paid by different animals. If any report appears to contain a self evident error, we reserve right of asking party to make a sworn statement.

"International Stock Food" is sold by over one Hundred Thousand Dealers on a "Spot Cash Guarantee" that the use of one ton will Make You \$500.00 net profit over its cost, or that one hundred pounds will Make You \$50.00 net profit. If it ever fails your money will be promptly refunded. "International Stock Food" is prepared from powdered, medicinal Roots, Herbs, Seeds and Berries and is equally good for Horses, Cattle, Sheep, Goats, Hogs, Cows, Calves, Lambs or Pigs. It is fed in small amounts mixed with grain and purifies the blood, tones up and strengthens the system and greatly aids digestion and assimilation so that each animal obtains more nutrition from all grain eaten. It will always make you more money than you can possibly make without its use. It also Cures and Prevents Many Forms of Disease and is absolutely harmless even if taken into the human system. In addition to the use of "International Stock Food" making you a large extra profit with your own breeding stock and fifteen years. The Editor of your "Farm Paper" will tell you that we always do exactly as we agree.

You have as good a chance as anyone in raising one or more of these cash premiums. They are much larger than any "State Fair" offers and the honor of obtaining one or more of these premiums will be much greater because the results will be published throughout the entire world. Premiums will be decided by us on the written statements which will be open for public inspection at any time. If you desire any further information we will be pleased to have you write us any time. All letters will be answered promptly as we have 800 people in our office to answer them. Reference: 7-8.

We do not ask you to send us a cent. Our offer is open to the world on very easy conditions stated below list of cash prizes. The premiums are perfectly free and are open to any man, woman or child. You can compete for one or more, and if successful you may earn several hundred dollars in cash.

DAN PATCH 1:56 FREE

^{1/2} LITHOGRAPHED IN SIX BRILLIANT COLORS ^{1/2}
 Mailed With Postage Prepaid If You Answer The Following:
 1st.—How Much Stock Of All Kinds Do You Own? 2nd.—Name Paper In Which You Saw This Offer.

INTERNATIONAL STOCK FOOD CO., MINNEAPOLIS, MINN., U.S.A.

HAVE YOU USED 3 FEEDS FOR ONE CENT?

CAN YOU USE ANY PART OF

\$100.00 CASH

TAKING AFTER PA.

The judge of one of the county courts went to his home the other afternoon, and, becoming acquainted with some flagrant act of his seven-year-old boy, summoned the lad into his presence.

"Now, sir, take off your coat!" he said sternly. "I am going to give you a whipping that you will remember as long as you live."

"If it please your honor," said the boy, "we desire to ask for a stay of proceedings in this case until we can prepare and file an application for a change of venue to mother's court. Our application will be based on the belief that this court has formed an opinion regarding the guilt of the defendant which cannot be shaken by evidence, and is, therefore, not competent to try the case."

Stay granted, and the boy allowed 25 cents for attorney's fees.

Buncombe Co., N. C., 4-13-05.

I enjoy your editorials more than any other part of the paper, especially the trucking feature, work for month, etc. May your paper have the patronage it deserves. C. C. WILLIS.

POLAND=CHINA PIGS

by BEECHHURST PERFECTION, the greatest breeding boar in Kentucky, and IGNITER, closely related to MEDDLER the World's Fair Show Hog. Pigs \$10.00 to \$15.00 each; 40 ENGLISH FOX HOUND PUPPIES \$5.00 to \$10.00 each; litter FOX TERRIER PUPS, males \$6.00 females \$14.00; 50 S. C. B. Leghorn Eggs, \$1.00; 100 for \$3.25. A FEW BERKSHIRE, at a bargain. If you want the worth of your money, write J. D. STOECHHILL, Shelbyville, Ky.

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ATHLETICS AT ANNAPOLIS.

By Mary Washington.

During a stay of ten days at Annapolis, your correspondent has seen ample proof of the fact that athletics are largely encouraged at the Naval Academy. With the opening of spring begins a series of base ball contests between the team of the Naval Academy and those of other colleges, but the latter have to come to Annapolis, like Mahomet to the mountain, as the "Middies" are rarely allowed to quit their own precincts except for the great annual army and navy game of foot ball at Philadelphia, on the Saturday following Thanksgiving Day. In the course of the past week, there have been three base ball contests at the Naval Academy. The first was with the team of Syracuse College, N. Y., on Easter eve, and on this, the "Middies," were victorious. Then on the following Wednesday, they played against the team of Trinity College, Conn., but a rain coming up, the game was left undecided, there being a tie between the two teams.

On Saturday afternoon, April 29th, the naval team played against that of the Maryland Agricultural College, and the former proved successful.

A spirit of wild enthusiasm prevails amongst the middies and their friends while these games are going on, venting itself in loud shouts and cheers and the peculiar navy yell, whenever the naval team makes a lucky hit. I cannot help feeling sorry for the visiting team which has no "claqueurs," and lacks the inspiring influence of friendly plaudits and cheers, no matter how well they may play. The games take place on the parade ground, an immense and beautiful green campus, with a band stand near its entrance, and seats arranged in tiers for spectators of the games or drills. There is also another institute in Annapolis, St. John's College, the members of which are active and prominent in base ball games.

Boat racing is one of the famous athletic exercises of the Naval Academy and very appropriately so, for here the middies are in their peculiar

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element. They have three crews, consisting of eight oarsmen each and a coxswain. They use long, narrow boats, so light that they pick them up and carry them back into the boat house when they have finished rowing. They have two boat houses, one for their own use, and the other for that of visiting crews. The young rowers look almost like pictures of the old Greek and Roman gladiators, so sinewy and muscular are their frames, and above all their arms, on which the muscle stands out like great knotted ropes. The first crew goes almost naked, wearing only a very short trunk hose, extending about half way between the thigh and knee, and a pair of slippers. In addition to this light vestment, the other two crews wear a sweater, low in the neck, and without sleeves. As I looked at their brawny, muscular arms, I recalled Tennyson's line about "The wrestling thews that throw the world." There is an absolute rhythm about their strong, graceful and regular handling of the oars, all eight in perfect unison, and in as perfect time as if they were regulated by a metronome. On Saturday, April 29th, there was a boat race between two of the Annapolis crews, and two crews of the University of Pennsylvania. They seemed so nearly matched in strength and skill that it made the race a very exciting one. The morning opened dull and cloudy, and it rained for a couple of hours, then to the great joy and relief of all Annapolis, it cleared off about 11 A. M. In time for the boat race. The officers, with their families and friends, went up the Severn river a few miles, in gunboats and steam launches to witness the race, whilst a large Government tug boat conveyed the middies, with their friends and relatives. The Severn is an arm of the Bay, extending about 7 miles inland. In going to the appointed spot, we passed two bridges which admitted the vessels by means of a drawbridge. At a given spot, there were stationed two boats exactly parallel to each other, and this constituted the goal of the race, the object being to see which of the race boats could pass first between these two boats. Close at hand was a boat containing the judges, referee and time-keeper. Another boat acted as police, keeping all vessels outside of the limits reserved for the racers. The race boats went up two miles above to start their race. The excitement was intense, as soon as the spectators discerned them speeding down the river, and as the two first boats drew near, it became evident that Annapolis was in the ascendant.

Such shouts, cheers and yells rent the air as I never heard before. As the Annapolis boat shot rapidly between the two boats that formed the goal, it was said that the stroke of the Pennsylvania crew fell back in a swoon, no doubt as much from chagrin as from excessive fatigue. When the second boats came in, Annapolis was ahead, which I hope was some salve to their disappointment, but the



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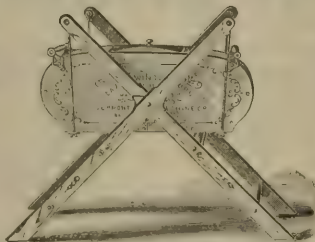
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Known as far as cows are known and a crowned success in every particular.

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Attempts at imitation are constantly being made. It is cheaper to let such die naturally, than to bother with their insignificance and clumsiness.

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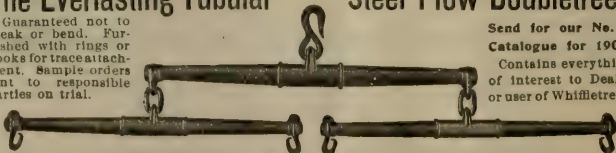
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We are selecting a few choice imported Cows and Heifers.

But the majority will be bred from imported parents, with all the *quality* of the Island animal, but being home raised *will prove more profitable* to the buyer than any directly imported.

We are selecting the quality and breeding to make this the best and healthiest offering of the year.

It has cost us many thousand dollars to cut our wisdom teeth buying at public auction, and we will protect our customers from a like experience.

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We can still fill orders for young bulls and heifers, and also 2 and 3 months old Berkshires without interfering with our public sale selection.

IT WILL CERTAINLY PAY YOU TO WRITE TO HEADQUARERS BEFORE BUYING.

Middies paid no attention to this, so jubilant were they over the triumph of their first crew. The stroke of the second naval crew was taken with a swooning spell, like the first Pennsylvania one.

Saturday was an eventful day there, one event trod on the heels of another. In the afternoon, there was a base ball game, followed by the annual "spring track and field meet," under the auspices of the Navy Athletic Association. This consisted of quite a variety of athletic exercises, besides running which was the chief one. There was pole vaulting, high jumping and broad jumping, etc., but the chief interest was concentrated on the running. They had a one mile run, a half mile run, a relay run, and short runs including hurdle jumping. It was an inter-class contest, the three classes now at Annapolis contesting for the championship which was won by the second class, at present the highest since the first class graduated in January, and the second class does not take that title till June.

The day wound up with a brilliant hop, the first, I believe, held by the Middies since the beginning of Lent. It was well attended and combined every requisite needed to make it pass off well, plenty of gallant young beaux, "a rosebud garden of girls," delightful music and a fine ball room. They use for this purpose the new armory, a large and splendid building, so immense that it looked thinly filled with several hundred couples, and I am told it will accommodate a thousand. It is splendidly lighted with electric lights, arranged in the form of arches. There is a great discrepancy between the old and new buildings of the Naval Academy. The latter are magnificent, whilst some of the former are almost of primitive simplicity, as for instance, the recitation building which is of wood, and in the plainest style of architecture, but these old buildings are to be pulled down as soon as the new ones are completed. They are building a very fine mess hall of granite, and an equally fine building for recitation. Amongst the fine new buildings they have made is one for marine engineering. Amongst the numerous interesting objects at Annapolis, I may mention two gunboats captured from the Spaniards during the Cuban War, the Alvorado, and the Sandoval, playfully termed "Gaston" and "Alphonse" by the Middies.

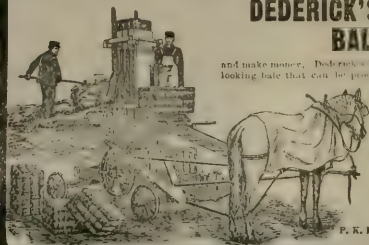
I learn with regret that they are not going to have any more figureheads hereafter for the vessels, the modern modes of constructing these leaving no place to put a figurehead.

Don't think for a minute that any man is interested in your troubles—unless he is a lawyer

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MAGAZINES.

The June St. Nicholas is decidedly an outdoor issue, as is fitting for a June magazine. The second installment of Edwin W. Foster's "Our Friends the Trees" introduces young readers to the horse-chestnut, the different birches and beeches, and other interesting denizens of our parks and woods. These articles, with their helpful illustrations, will enrich the summer life of readers young and old. Joseph H. Adams' "Practical Boy" papers tell this month how to make tents, camp furniture and water wheels; and Dr. Emma E. Walker's "First Aid to the Injured" articles treat of fractures. Then there is a delightfully illustrated story of "How Some Flowers Got Their Names"; and that friend of wild things, Silas A. Lottridge, recounts his experiences "Photographing a Wild Fox." There are outdoor pictures and rhymes; and two vacation stories, "The First Voyage of the Brotherly Love," By Elizabeth Hill, and "Ridge's Triple Play" by Marjorie Allison.

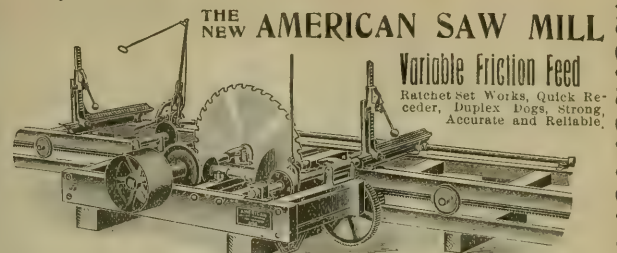
June Lippincott's Magazine. "The Lady from the Sea," a new novelette by Cyrus Townsend Brady, appears complete in the June number. As the title indicates, this is a tale of the sea, so thrilling, so romantic, so full of adventure that it compels devouring interest from its first to its last page. The heroine is named Ellen Smith, and the Captain, who is her gallant lover, and her jailer as well for a time, is named Jones, and he had begun his career at the age of eleven as captain's servant. This humble origin was displeasing to his sweetheart's father, and only after three years of separation from the girl he loved Jones returned with a determination to seek Ellen and take her, will nilly, for his own.

A charming short story by Eleanor A. Hallowell is called "Hickory Dock." It is about "A Man and a Girl who trifled with Time;" it is extremely diverting and is very cleverly treated. Will Levington Comfort, whose Manchuria yarns are much relished, by magazine readers, contributes one of the brightest he has written. This is called "The Remittance Man," and it deals with the experiences of an American and an English younger son who has "left his country for his country's good." "The Second Star," a Mormon episode, by Caroline Lockhart, is both humorous and pathetic. "A Sure Test," by Mary Steward Cutting, is a tale of an interrupted pro-

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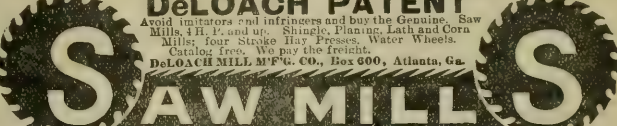


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Hammond's Slug Shot for Potato Bugs.

TO THE EDITOR OF AMERICAN GARDENING:

In your issue of June 18, on page 399, I notice a good article on the Colorado Beetle or Potato Bug. For the benefit of your numerous readers, I would advise them to try HAMMOND'S SLUG SHOT. I have used it here this season with excellent results, on Potatoes, Egg Plants, Cucumbers and Squash- for Potato Bugs, and also for Striped Beetles, and it is the best remedy I know of, simple and effective. I purchased two of the DUSTERS which be advertised in your paper, and they are very useful articles. The best time to dust the plants is early morning, as the substance adheres much better when the dew is on. A light dusting is sufficient, and we betide the bugs or the larvae. Once they get a taste of it they shrivel up right away.

Sold by Seed Dealers and Merchants all over America. **GEORGE STANDEN, Gardener to Col. D. S. Lamont, Millbrook, N. Y., 1904.**

Send for Pamphlet on Bugs and Blights to **BENJ. HAMMOND, Fishkill-on-Hudson, N. Y.**

is on. A light dusting is sufficient, and we betide the bugs or the larvae. Once they get a taste of it they shrivel up right away.

posal which left room for doubt in the mind of the girl. Her scheme to settle this doubt was successful.

There is so distinct a war flavor to the June Century that it might well have been called a Memorial Day issue. Thomas M. Scummers contributes "A Pupil's Recollections of Stonewall Jackson"; Leighton Parks, very happily told, "What a Boy Saw of the Civil War"; George Langdon Kilmer, "Boys in the Union Army," a subject of growing interest; and "the one who followed him," "Recollections of Jubal Early." Four stories sound the same theme: "Miss Sally and the Enemy," in Gouverneur Morris' happiest vein; "In the Virginia Room," by Arlo Bates, a story to read with heart full of sympathy; "Two Pensioners," by Harry Stillwell Edwards, bubbling over with quiet fun; and Ruth Kimball Gardner's "John Edward's Friend," a Memorial Day story of childish pity and patriotism. Coming down to later days, Capt. Horace M. Reeve recounts the stirring story of "The Defense of Baler Church" by Spaniards in the Philippines, and Herbert J. Hagerman has much of interest to tell of "The Russian Court."

The June Century puts its readers in touch with notable achievements of the day, in this country and abroad. Gilbert H. Grosvenor, editor of The National Geographic Magazine, and author of "Inoculating the Ground" and of "The New Method of Purifying Water" in recent issues of The Century, has written of "Our Heralds of Storm and Flood." This account of the various activities of the United States Weather Bureau in saving life and property will be a revelation to most readers. The numerous illustrations add much interest. The story of "The Piercing of the Simplon," the longest tunnel in the world is one of the most fascinating chapters in modern engineering. Dresher Welch's account in The Century comes just when all eyes are turned to the opening of the great tunnel to railway traffic. There is another installment of Melville E. Stone's most interesting articles on "The Associated Press," giving this month all the unfamiliar details of the business of news-gathering. Richard Whiteleg writes of "The Chateaux of Touraine," Blois, Amboise, and Chateaux; and the little known Victoria Falls, Africa's rival to our Niagara, are described by Theodore F. Van Wagenen.

Greene Co., Ill., 4-11-05.

I got lots of good things out of the SOUTHERN PLANTER the past year, all clean and honest. I wish you many more years of usefulness.

W. P. STRUNK.

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"Say, look here!" carpingly ejaculated the baking powder drummer, who was tolerably familiar with the affairs of the hamlet. "Why in the deuce did this community elect that red-nosed, jack-legged old wind-jammer, Colonel Boomwall, to the Legislature?"

"Well," replied the landlord of the tavern at Polkville, Arkansas, philosophically, "we couldn't elect him to the penitentiary, could we?"—Woman's Home Companion.

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That day I went out in the rain
And found that it was wet.

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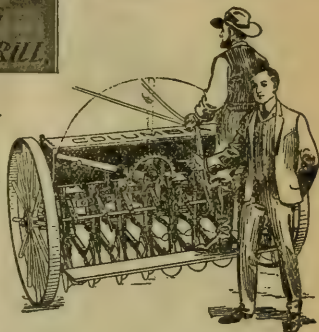
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1, 2, 4 and 6 years.

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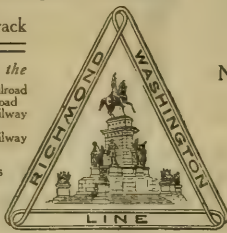
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In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

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News-Leader, Richmond, Va.	3 00	3 00	
The Post, Washington, D. C.	6 00	6 00	
The Sun, Baltimore, Md.	3 00	3 40	
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Central Presbyterian, Rich- mond, Va.	2 00	2 25	
Religious Herald, Rich- mond, Va.	2 00	2 25	
Southern Churchman, Rich- mond, Va.	2 00	2 25	
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Breeders' Gazette	2 00	1 50	
Country Gentleman	1 50	1 75	
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Kimball's Dairy Farmer ...	1 00	75	
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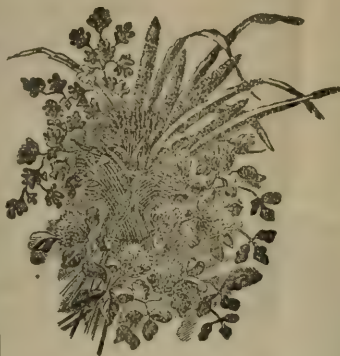
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"I beg your pardon," remarked the grocer, courteously, "but it isn't the soap. Your little boy came in here yesterday for half a pound of both soap and cheese; that's the cheese."

"The cheese!" gasped the lady. "That accounts for the other thing, then."

"The other thing?"
"Yes, the other thing," came the reply, "I was layin' awake half the night wonderin' what it was made the Welsh rarebit we had for supper taste so funny."

Southampton Co., Va., 4-11-05.

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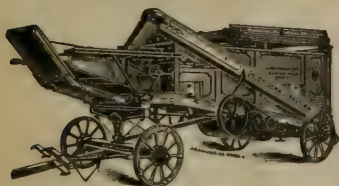
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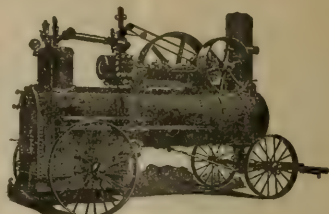
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY

66th Year.

Richmond, Va., July, 1905.

No. 7.

Farm Management.

WORK FOR THE MONTH.

The month of June up to this writing (20th) has been on the whole one favorable to the growth of crops though the first part of the month was abnormally cool and dry over a considerable part of the South. Since that time showers have been frequent and though not very equally distributed have visited more or less nearly every section, and have been accompanied by more seasonable temperatures, and the result is seen in the improved condition of all crops. Whilst rain is needed now in greater quantity yet there is no section of the South suffering seriously from drouth neither is there any section suffering from floods. Locally in a few sections thunder storms have caused floods which have done some damage but these not over sufficiently large areas to amount to disaster.

The condition of the wheat crop of the country is still a distinctly promising one though falling back somewhat each week from the high condition of the earlier months of the year. The average condition of winter wheat on June 1st was 85.5 as compared with 92.5 on May 1st, 77.7 on June 1st 1904, and a ten year average of 79.2. The average condition of Spring wheat on June 1st was 93.7 as compared with 93.4 at the corresponding period last year and a ten year average of 94.4. The area seeded in Spring wheat is about 500,000 acres in excess of that sown a year ago. In the South and Middle States the straw is short but the heads are reported as generally good though we have complaint from several places that they are not so well filled as would be liked and

from some sections of blight and smut. We hear also complaints of damage by Hessian fly in the Middle States. Though on the whole the promise is for a crop considerably in excess of that of last year we are strongly of opinion that it will fall far short of being the bumper crop predicted by some even though the rest of the season should be propitious for growth and harvesting whilst if the harvesting season be unfavorable we shall look to see the yield reported fall far short of a great crop. The reports of the European crops are not at all glowing. In England and France the weather has been too cold and wet for best growth. In parts of Russia, Austria, Hungary and Southern Europe more favorable conditions have prevailed and there the crop promises better. We do not, however, see any reason why those who have harvested their crop should be in a great hurry to sell. We think that the price will be likely to keep firm for some time and then will more probably advance than decline. It should be borne in mind that there is only a very small reserve of the old crop left in this country and that had it not been for the wheat brought into the country from Canada our reserves would have been exhausted. It will take a large crop to make good depleted reserves and until these are made good there is not likely to be much fall in prices.

The oat crop is somewhat larger in area than that of last year and the condition is higher than the ten years average, indicating a larger crop. In the South the Winter oat crop where sowed early is making promise of a good yield, but much of the crop was seeded late and suffered during the long winter and

cold spring and will not make an average crop. The Spring oat crop on account of the coolness of the spring and the late opening of summer weather is better than the average. The tobacco crop is making good progress, the showery weather having conducted to good stands except where cut worms have done damage. Though planted rather late on account of cold unseasonable weather the plants are now making rapid growth. The area planted in the sun-cured type in this State will be about the same as last year as is also the case with the dark type. In the old bright belt both in this State and North Carolina a reduced acreage has been planted. In the new bright belt in Eastern North Carolina and in South Carolina there is considerable increase in the area planted many farmers having planted tobacco instead of cotton. The condition of the crop in these sections is not as good as could be wished not having been sufficiently worked on account of scarcity of labor and too much wet weather.

Meadows are being cut for hay and much good hay has already been saved. The crop is not heavy—the cold weather hindered growth. Pastures are in much better condition now than they were a month ago the warm showery weather having helped them. The corn crop is now making much better progress than it did at the commencement of the season. The cold dry weather hindered germination and growth. On the whole we do not regard the condition of this great staple crop as very promising in the South. Whenever corn fails to make quick germination and continued rapid growth it rarely makes an average yield. Without warm damp weather corn cannot start off well and those conditions have been absent until within the last few days. If we should have a continuance of the present warm showery weather and the land should not become too wet to work frequently there should be material improvement in the condition of the crop but only upon good land in a fine condition of tilth can the crop be expected to make good the set back which the cold dry weather gave it.

The cotton crop is not promising a heavy yield as much of it has been poorly worked the season having been too wet. The cold weather has also stunted the plants.

In this issue will be found reports as to the condition of the fruit crop.

Reviewing the whole crop situation indications at present are not the most promising for heavy yields but there is yet time for much to be done to improve this outlook and farmers would do well to utilize every opportunity.

Keep the cultivators at work in the corn, cotton and tobacco crops at every opportunity so that they may be encouraged to make rapid growth and weeds may be kept down. Cultivate shallow and keep the soil level. Do not stop cultivation until it is impossible to go through the crops without breaking them. The amount of moisture required to make a corn crop is enormous, at least 300 pounds of water for every pound of dry matter produced, and this is nearly all called for in July and August. Unless almost constant cultivation is the rule so as to conserve the water already in the soil and permit that which falls to be absorbed at once the crop cannot possibly have its needs supplied. When it is impossible to continue cultivation without breaking down the crop then sow Cow peas, Crimson clover or Sapling clover in the crop and cover at the last cultivation. This will shade the land and provide for a winter cover for the same besides giving late fall and winter grazing.

The deficiency in the hay crop may be made good by sowing Cow peas, millet, sorghum and corn for the silo and for fodder. All these crops will yet make good returns on land in a fair condition of fertility if got in on a good seed bed. Sorghum and peas sown together at the rate of three-fourths of a bushel of peas and one peck of sorghum seed to the acre makes excellent hay. Cow peas and millet seeded together also make good hay. Millet and Crimson clover may also be seeded together. The millet will make a good hay crop cut when in bloom and the Crimson clover will then continue its growth during the fall and winter and make a forage or hay crop in the spring. Millet should be sown at the rate of one bushel to the acre when seeded alone. Either the German or Hungarian variety may be used. It should be cut before the seed forms and then makes a safe good hay for stock of all kinds.

We desire to urge upon every farmer the importance of sowing Crimson clover as an improver of the land and for a spring forage and early hay crop. The value of this crop has not yet been half appreciated as it ought to be. All land left bare in the South wastes its fertility faster than if producing a crop. If in addition to making a cover for the land a crop can be grown which will also add nitrogen to the soil gathered from the atmosphere this is the crop which should be seeded. This in the South we can do by seeding either Crimson clover, Hairy vetch, or English vetch. Crimson clover should be seeded from July to September. Hairy vetch from August to the

end of September and English vetch from September to November. A good crop of Crimson clover will in its roots and top add from 100 to 150 pounds of nitrogen per acre to the soil. Hairy vetch will add even more than this per acre and English vetch about the same. In addition to the nitrogen gathered and stored all these crops add largely to the humus content of the soil and thus aid greatly in improving the physical and mechanical condition of the soil. All these crops grow here at a time when in the North nothing is growing, and here their growth does not interfere with the growing of the staple crops of the summer as they come off the land in spring in time to permit of the planting of these and prepare the land for them. They are all legumes and largely dependent for their successful growth on the presence of the specific bacteria of each crop in the land. Most of our land is more or less infected with the clover and vetch bacteria already from the growing of red clover and from the Wild vetch, and, therefore, they may be sown almost everywhere with a reasonable prospect of success. Wherever they have failed to make a growth in the past we would advise an application of 10 or 15 bushels of lime to the acre to correct the acidity of the soil which is always fatal to the growth of bacteria, and the inoculation of the seed or land with the specific bacteria of the particular crop to be seeded. These can be had from the Virginia Experiment Station or soil from a field which has successfully produced the particular crop required should be spread on the field before seeding at the rate of 100 or 150 pounds to the acre. More Crimson clover stands, however, are lost from the scorching of the sun than from absence of bacteria in the soil in the South. Crimson clover germinates very quickly and makes leaves before it has much root. A hot sun striking the crop for two or three days just after germination will often kill out the whole stand. The safest way to proceed is to sow a few acres and then stop for a week and then sow a few more acres and stop again and so proceed until all the area is seeded. In this way some of the seedling is sure to make a stand and that which is killed can be seeded later with Hairy vetch or English vetch. It is always best to sow along with the Crimson clover a mixture of Winter oats, wheat and rye. These cereals shade and protect the Crimson clover and make excellent hay in mixture with the clover. Sow 10 or 12 pounds of Crimson clover seed to the acre with three-fourths of a bushel of wheat, oats and rye mixed in equal parts. Where Crimson clover is seeded alone sow 15 pounds to the acre. A couple of pounds of Dwarf Essex rape or turnip seed may

be sown broadcast with the clover and grain and will increase the pasturage where the crop is only intended for hay as they cannot be made into hay. Where land was well and deeply broken for the previous crop there is no necessity to plow again before sowing Crimson clover. Cut up with the disc or cutaway harrow, running both ways, thus securing a fine surface soil to the depth of 4 or 5 inches and then sow the clover and grain, harrow in and if dry enough roll. By the growing of Crimson clover and plowing the same down land can be so improved as to increase the yield of corn from 25 to 50 per cent. and if from 25 to 50 bushels of lime per acre be applied before seeding the clover and 300 pounds of acid phosphate be applied when the clover is plowed down in the spring the corn crop will usually be still more largely increased.

As soon as the wheat and oats have been harvested where clover and grass was not sown in the crop in the fall or spring and where the land is not intended to be seeded down permanently with grass and clover in the fall have the stubble broken with the disc harrow and sow Crimson clover with a mixture of wheat, oats and rye, say 10 pounds of Crimson clover seed and three-fourths of a bushel of the grain mixture to which may be added two pounds of rape seed or turnip seed per acre, and harrow in and thus make the land grow something to graze and improve it instead of a crop of weeds. Harrow the seed in and roll if dry. The practise of allowing grain stubbles to grow up in weeds and thus exhaust the soil of fertility and moisture and fill the land with more weed seeds is one that ought not to be allowed to continue. In England where no such crops of weeds are to be seen as are common here but only very light growths, one of the first things attended to after harvest is to turn over the stubbles with a light furrow to bring all weed seeds to the influence of the sun and moisture and thus cause them to germinate and the young plants are then killed by harrowing the land several times as they sprout. In this way weeds are kept down, fertility preserved and the soil aerated. There harvest is too late to allow of the seeding of another crop to make winter grazing and also feed the land with a winter growing crop.

Where clover or grass or both has been seeded in the wheat or oats do not allow a crop of weeds to exhaust the soil of its moisture and fertility and thus kill out the young stand of clover and grass. Thousands of acres are lost every year in this way. As soon as the weeds are tall enough for the mower to

catch them run the mower over the fields and clip off the weeds, leaving them as a mulch to protect the young clover and grass. Repeat the operation as often as needed to prevent the weeds from seeding.

August and September being the best months of the year in the South for sowing clover and grass and for seeding Winter oats preparation should at once be begun for seeding these crops. Plow the land intended to be sown as soon as the crops are off and before they have become baked and hard. Plow as deep as can be done without turning up more than an inch or two of the subsoil and then work the land with a heavy harrow or cultivator every week or ten days so as to bring the seed bed into fine condition. An application of 20 bushels of lime to the acre applied after the land is plowed and worked in will correct acidity in the soil and tend much to ensure a stand of clover, besides helping to make available the inert fertility in the soil. As neither grass nor clover can be expected to succeed if the soil is not rich an application of 400 or 500 pounds of bone meal to the acre should be made and be worked into the soil and then, after the seeds have commenced to grow freely, a light top dressing of farm yard manure will almost certainly ensure a stand which the winter will not seriously injure. The great secret of successful grass culture is perfect preparation of the land before seeding, therefore, you cannot afford to neglect beginning the work as early as possible.

August and September being the best months for seeding alfalfa in the South (except in the mountains where it should be sown in spring) it is none too soon to commence the preparation of the land intended to be sown. We have for several years been urging Southern farmers to grow alfalfa and at last we have got many of them to try the crop. Already success is assured if only proper means are taken to fit the land for the crop. We know of numbers of farmers who have already cut two crops of alfalfa of from 1½ to 2 tons to the acre at each cutting and who have another crop growing and fast getting ready for the mower. Alfalfa is the most valuable crop which a farmer can grow. It is both grain and fodder for stock of all kinds and when once a field is thoroughly set will continue to give its three or four crops every year if only care be taken to keep it well supplied with manure and fertilizer. At the outset it should be understood by every farmer that a crop which makes such heavy cuttings of hay every year cannot be grown on poor land nor can it be grown on

land infested with weeds. The first step, then, to take is to select a piece of rich land or to make a piece of good land rich and then to clean it thoroughly of weeds. Alfalfa succeeds best on loam land but will grow well on land in which there is a considerable proportion of clay always provided that the land is well drained. Good drainage is essential to the success of alfalfa. The ground water level must be at least 12 to 18 inches below the surface of the soil and the surface of the soil must be so open as to absolutely prevent the standing of water on the crop. Water standing on the surface rots the crowns of the plants and quickly destroys the stand. Let the land be deeply broken with the plow then apply 15 or 20 bushels of lime to the acre and work fine with harrow and cultivator and induce the weed seeds to germinate and as they begin to grow kill them by repeated harrowing. Keep up this working of the soil until the middle of August and then apply 500 pounds of bone meal per acre and work into the land well. Inoculation of the soil or seed with the specific alfalfa bacteria or with soil from a field which is growing alfalfa or Burr clover is essential to success. Alfalfa bacteria can be had from the Virginia Experiment Station at a cost of 25 cents per acre. Soil infected with the bacteria can be had in most sections of the State or from parties who advertise the same in our columns. From 100 to 150 pounds of soil is required per acre and should be sowed over the land before the seed is sown. In using the alfalfa bacteria be careful to follow the directions given as these are essential to success. In our next issue we will say more on this crop, in the meantime be preparing some land for at least an experiment with the crop.

July and August are the best months in which to seed Dwarf Essex rape for fall pasture for the hogs and sheep. The value of this crop for feeding these animals is not yet appreciated in the South as it is going to be. An acre of rape has been found at the Wisconsin Experiment Station to be the equivalent of 2,767 pounds of grain when fed to hogs. Sheep and lambs fatten on it quickly and its use for this purpose will largely prevent the infection of the flocks by parasitic worms the embryos of which are taken into the animals when grazing on old pasture lands which are in the South, in many sections, badly infested with these hindrances to profitable sheep keeping. If the ewes and lambs are kept off these old pastures and only grazed on crops such as Crimson and Red clover and rape and turnips they will escape infection and prove most profitable directly, and

indirectly will add greatly to the profit of the farm by the manure they will leave on the land. Prepare the land finely either by plowing and harrowing or with the disc harrow and sow four pounds of seed per acre broadcast, or two pounds of seed in drills two feet apart will sow an acre. The crop makes the best return sown in drills and cultivated two or three times. Milch cows should not be pastured on the crop as it will taint the milk, but young cattle may eat it with advantage, though care should be exercised when first turning them on, as also with sheep, as it is apt to cause bloating, especially if eaten wet. They however, soon become accustomed to it and this trouble does not then occur.

Prepare land for rutabagas and turnips. Plow and work fine. To make a heavy crop the land should be made rich with farm yard manure supplemented with acid phosphate and muriate of potash. If manure is applied use 300 pounds of acid phosphate and 50 pounds of muriate of potash per acre. If no manure is used double the quantity of phosphate and potash should be applied. The heaviest crop will be made by sowing in drills two feet apart; two pounds of seed will sow an acre in this way. If sown broadcast four pounds of seed will be required. When sown in drills the plants should be thinned with the hoe so as to stand nine inches apart in the row when they have made two or three leaves. Cultivate frequently and keep level. Rutabagas should be sown in July. Turnips may be seeded in August and September. With rich land and good cultivation we have made 30 tons of rutabagas and 20 tons of turnips to the acre. No man who keeps sheep can afford not to have rutabagas and turnips for them in winter and spring. They are essential in making a good lamb crop. As feed for cattle they are also excellent as they tend to keep the stock healthy and in thriving condition and aid much in the assimilation of other feed.

See to it that the various forage crops: Cow peas, Cow peas and sorghum, sorghum, Soy beans and millet are cut and made into hay as they become ready. For hay all these crops should be cut before the seed matures. The best time to cut them is when the seed is just forming or in the case of Cow peas when the first pods are turning yellow. Cure as much as possible in the windrow and cock so that the fine leaves are not lost by being overdried by the hot sun. In our last issue we published an article on curing Cow pea hay to which we refer our readers.

If you have no silo now is the time to build one so that it may be ready to hold the corn, sorghum and Soy bean crops as they become ready. A silo is the cheapest barn a man can build for taking care of his crops and it keeps these in a succulent condition so that the stock get the best results from the feed. A writer in the National Stockman who carried 400 head of young Hereford cattle over last winter with silage and hay says that the cost per head per day of feeding this stock for five months was 6½ cents and the cost of the gain in weight made was 3½ cents per pound. These young cattle were fed all the silage they would eat made from corn and Soy beans and clover, alfalfa and oat hay and a small ration of cotton seed meal. They consumed from 25 to 30 pounds of silage and 2 to 3 pounds of hay per head per day and made an average gain of 1½ pounds per day. In no other way than with a silo could such results have been secured. We have repeatedly published full information for building both costly and cheap silos. Our issue for July, 1903, contains a very detailed article on the subject and in July, 1904, we gave further information on the subject, whilst in our May issue of this year we published an article describing the building of a wood hooped silo. A round silo is preferable to a square one as the silage settles better. All that is needed is to make a practically air-tight tub or tank. Always be careful to get all the depth possible compatible with convenient handling of the silage, as the deeper the silo the closer the silage will pack and the closer it packs the better the product. The following table will enable any one to calculate the size of silo he will need for his crop and stock.

Estimated size of silo needed, and number of acres required for a given number of cows, for a feeding season of 180 days:

No. Cows.	Estimated Consumption of Silage, Tons.	Size of Silo Needed, Diam. Ft.	Average Acres Corn Needed.
6	20	9x20	1 to 2
9	30	10x22	2 to 3
13	45	11x25	3 to 4
21	74	13x29	5 to 6
25	90	14x30	6 to 7

REPORT ON SOME EXPERIMENTS WITH ALFALFA.

Editor Southern Planter:

Alfalfa is the most fascinating plant I have ever studied. Its growth is beautiful. It responds so quickly to the influences of its environment. It defies the most careful farmer and when he does succeed, he feels proud of himself. Here in the East,

it is difficult to secure a good stand of alfalfa, even when all precautions are taken. It richly repays, however, all the time, care and attention given it. Alfalfa is the only perennial clover that is profitable as a hay crop. I doubt if any clover makes hay superior to alfalfa. The nitrogen content is very high and so it is most valuable for breeding stock. The fact that three crops can be made each year from alfalfa ground shows its great value to the farmer, as a hay producer.

Since the Agricultural Department at Washington has been preparing bacteria cultures for the farmers, there have been numerous tests made. There certainly must be in most sections of Virginia a dearth of the specific organism that works over the nitrogen of the air into food for alfalfa, as there have been so many failures, due seemingly to mere starvation of alfalfa plants. The alfalfa will sprout, grow for a few weeks, turn yellow and die.

Years ago when I was at college at Hampden-Sidney, Va., (Prince Edward county), I remember a most luxuriant patch of alfalfa, called then "Lucerne," in the garden of our President. I thought it the most beautiful plant I ever saw. No one at that time bothered himself about bacteria in the soil. No one knew of these little nitrogen experts then. They were there just the same in Prince Edward and I suppose they are there still. What a boon to those farmers! Let those farmers know, though, that it will take abundant supplies of stable manure, phosphoric acid and lime to get alfalfa started for the bacteria on the old fields of Prince Edward.

In Albemarle county I recall quantities of *mellilotus* growing in the bottoms and even by the roadside. It is generally believed that where *mellilotus* flourishes alfalfa bacteria are abundant. So in Albemarle I am confident that alfalfa will thrive on the deep soils. Quite recently I was in the Valley of Virginia and was surprised to see *mellilotus* growing profusely all along the railroad from Staunton to Newmarket. I infer that alfalfa bacteria are already in the Valley. We are not so fortunate in the mountainous sections, but we have limestone land, which is an encouragement.

I have the good fortune of living part of the year in the good old State of Georgia and part of the year in a favored section of West Virginia. Wherever I go I look out for alfalfa, brag on it, urge people to grow it, if they have grit and perseverance, and I have done some experimenting myself in both States named.

I desire to report briefly some experience with alfalfa in Georgia.

First, let me tell you something that has always interested me. Some years ago a gentleman asked me to advise a seed mixture for a garden he wished to turn to grass. It was a very rich spot for Middle Georgia, strong clay with a little sand. After he got his seed I slipped about a quart of alfalfa seed in it and said nothing, but thought I would watch results.

The alfalfa came up well, but most of it died out, leaving a few scattered bunches, probably fifteen or twenty that grew green and strong. Four years have passed and still they stand, setting their roots deeper and deeper, until I opine they are tapping the eternal springs some twenty or twenty-five feet deep.



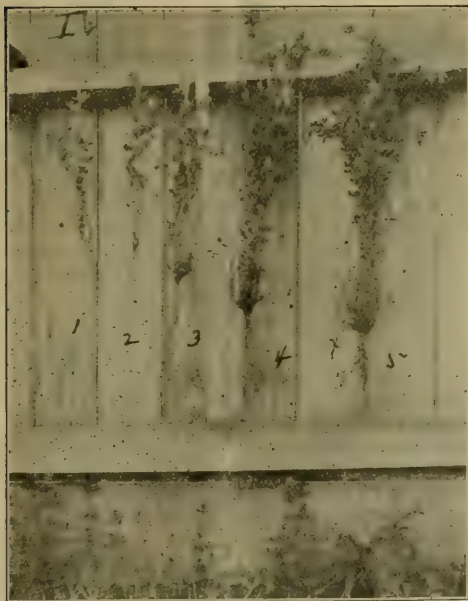
CUT NO. I.

Near the surface these roots are as thick as my wrist. Tubercles are plentiful. Whence the bacteria? Why did the alfalfa grow in such scattered spots? I have thought that these bacteria are more generally disseminated in the East than most persons think, but certainly the soil of Georgia contains too little to insure a good stand of alfalfa. Note my experiments below.

For my own interest I prepared a plot in my garden and manured it well. Then it was spaded about eighteen inches, allowed to lie, until first crop of weeds could be killed, then sowed in eight strips as follows:

1. Three hundred pounds dissolved phosphate rock per acre.
2. Three hundred pounds dissolved phosphate rock and 50 bushels of lime.
3. Same as No. 2 with inoculated soil in addition.
4. Three hundred pounds dissolved phosphate rock and 100 pounds potassium nitrate (saltpetre) per acre.
5. Same as No. 4 with addition of 50 bushels of lime per acre.
6. Same as No. 5 with addition of inoculated soil.
7. Three hundred pounds phosphate rock, 100 pounds nitre (sodium nitrate) and 50 bushels of lime per acre.
8. Same as No. 7 with addition of inoculated soil.

The phosphate rock showed 14 per cent. available phosphoric acid. The inoculated soil was put on at rate of about ten bushels per acre. Same quantity of tested seed sown in each strip. The strips were three feet apart and isolation secured by inserting twelve inch planks edgewise in the spaces between strips. I think these planks prevented surface water from passing from one strip to another.



CUT NO. II.

Wish you could see this alfalfa. I have tried to photograph it for you with a forty inch ruler to compare it with. Hard to show it as it is. I tried to

take average plants from five strips for cut No. I. These plants were taken from No. 1, No. 2, No. 7, No. 6, No. 8 in order shown in photo. The three



CUT NO. III.

inoculated strips were quite similar, from which I infer that on well manured land in this section of Georgia, potash and nitrogen need not be added. Roots were covered with clustered tubercles, but it was hard to remove plants from soil without stripping most of them off, as they are found largely on delicate root hairs. You can see a few in cut on 4 and 5. I took plants up on April 15, 1905, just in bloom, one year and two days after seeding. At this time the soil was dry and I got many tubercles on roots, but made a failure with photo. Plants were over three feet high in inoculated strips. Wish SOUTHERN PLANTER could reproduce photo, but it is doubtful. Alfalfa was cut April 20, and on May 25, 1905. I took up the plants shown in cut No. II. It was almost ready to bloom. Soil was wet and tubercles were stripped from roots in spite of utmost care.

In cut No. III for contrast I show a plant from strip with no lime and no inoculation, strip No. 1, in contrast with one from strip No. 8. This was at first cutting in April, photo very poor.

Alfalfa can be made to grow in Georgia on good deep soil.

Here in West Virginia our alfalfa is doing fairly well. We made our first cutting June 10, 1905, about one ton and a half per acre. Some weeds are in this alfalfa which will trouble us. They probably come from stable manure. This is a serious trouble. It would be better to add commercial fertilizer or water from stable manure. This alfalfa was sown last year in April with spring barley as a nurse crop. We are inclined to favor putting in Cow peas in spring, and killing weeds well after cutting peas and sowing to alfalfa in August without nurse crop.

We are in the fight for a lot of alfalfa and we expect to succeed.

H. B. ARBUCKLE.

Marxweton, W. Va.

EXPERIENCE WITH LEGUMINOUS CROPS—LIVE STOCK ESSENTIAL.

Editor Southern Planter:

I tried seeding common Red clover and Timothy mixed in buckwheat, got a fair stand considering conditions. I plowed down heavy rye stubble with its accompanying growth of weeds in July, worked ground fine with harrow and covered seed with weeder, sowed August 1st. The next time I shall use Clark's plan and thoroughly cut land with disc harrow to a depth of four inches, then break deeply with large plow and work down and cover with roller. I tried this way on very foul land this spring for peanuts and it makes a perfect seed bed clear down and one that a crop will continue to grow in in very dry weather.

We grow velvet beans for hay and we have trouble to handle them but they dry nicely and the hay is good. This year we planted them in rows six feet apart with a row of Sojas between to keep them up.

We think them better soil improvers than either the Soja or Cow pea.

We planted cotton after Sojas this year and just now it is 20 per cent. ahead of the rest of the crop and this on thinner land, too, and planted two days later. The beans were cut for hay.

Your paper is the one for newcomers and if you would advertise it as such in Northern and Western sections you would certainly benefit the immigrants if no one else and I think it would pay you.

I like the illustration of the barn in the June issue. Let us have more building plans for farm buildings. It will encourage us to build shelter for our stock and that means more money for us.

The "remedy" "N" wants for the "landlord" and "tenant" farmer is stock raising. I would not think of renting a farm to a man who would only keep

working animals. The way to do is to start with native stock using thoroughbred sires and do not let them run wild either. Our entire herd of cattle is yarded each night during summer and stabled during winter. The manure pile amply pays for yarding and stabling saves feed and keeps them in good condition. On the whole we are doing the best we can to follow your teachings and are doing better each year. We think you do know something about the business.

When we have a kick coming will tell you.

Greensville Co., Va.

L. N. KLINE.

INOCULATING LEGUMES.

Editor Southern Planter:

In these days of "nitro-cultures" a review of the means whereby legumes become inoculated may serve to throw a little light on an important subject. The seeds of all the legumes must carry some adhering microbes because no matter how clean the seed or how strange the plant may be to the soil an occasional one appears stocked with nodules. In one bushel of Hairy vetch which I sowed several years ago on land which had never grown anything of the kind I found but two stocked plants. Those inoculated plants grew luxuriantly and all the others were failures—yellow and stunted.

The seed had been imported and must have been put through a smut mill or something like it, because they were quite slick and unlike Hairy vetch seed which I raised myself which are fuzzy. I threshed out this seed by trampling with horses and sowed them in the chaff and every one bore an inoculated plant on uninoculated land. It is easy to understand how the fuzz and chaff could be carriers of germs. As is well known Burr clover never needs to be inoculated because the little curls which encase the seed carry enough microbes to inoculate the plants. In like manner Japan clover becomes inoculated through the practise of spreading the scrapings of surface soil where such clover has been growing over fresh land thereby seeding and inoculating the land at the same time. I doubt if seed dealers confer any benefit on farmers when they thresh the seed out of those little clover burs, or go to much labor in cleansing the seed of legumes. In this country where a large quantity of peas are raised to sell the pods are picked by hand and threshed out with sticks on the land where they grew, at the end of the day's work. Hence the eyes and wrinkles on the surface of the peas may become nests of microbes. Before the days of clover "hullers" clover chaff was scattered over

the fields to seed them and by that means the clover germ also was spread far and wide over Western New York and Ohio, etc. In later times farmers experienced difficulty in getting clover to start right in new States, just as we have trouble nowadays in starting alfalfa. Though, of course, there may be other complications to contend with, such as acidity of soil, which I now know to be the cause of failure when I first started alfalfa, even with inoculated seed. Another source of legume inoculation doubtless is wild plants growing in the neighborhood. I found that Red and Crimson clover were helped by wild Buffalo clover and Bird foot trefoil. The wild white vetch of our woods also did some inoculating on English vetch for me. I don't know what stocked Velvet beans so well for me every time. For in every instance they had an ample supply of knobs. (It would be a misnomer to call them tubercles or nodules), and if any means were devised whereby Velvet beans could be used for hay no annual legume that I know of can compare with them as soil improvers. Farm yard manure made from feeding soy and pea hay inoculates for these plants in a way that leaves nothing to be desired. So likewise with Red and Crimson clovers. Indeed manuring was well known to be a most efficient means of inoculating land long before the causes were understood or anybody imagined such a thing.

In the far West where alfalfa has been such a grand success, I felt confident that the native wild plants have helped to prepare for the alfalfa much as Sweet clover or Burr clover does here in the East. Indeed the latter long ago naturalized itself in California as Japan clover has done here in the South.

Now inoculation such as I have described is well enough to get a start with but is not always sufficient to ensure the full benefit of the process. True, alfalfa or clover may catch up, for they have time, so germs can spread and inoculate all alike. Yet full inoculation gives an even start and helps to exclude weeds. But peas or soy beans live only a few months, and I find for such plants the only way is to sow again the year following. But it won't do to plant legumes year after year on the same land because they may become stocked with some undesirable germ causing disease like "clover sickness," of which there may be many kinds, for clover, for aught we know, may be heir to as many ills as ourselves. Here is where those nitro-cultures can be of benefit to us. It won't do to leave too long an interval of years between a given legume in a rotation because the power of inoculation dies out in the soil in a short time. This is easy to prove notwithstanding some

learned man who ought to know better recently stated that once land was inoculated it remained so perpetually. Although some soils retain and acquire that power much better than others, as a rule good land does best in this respect, so I observe, and galled places destitute of vegetable matter don't do well at all. However, I see it claimed that extremely rich land is also unfavorable to the growth of legume germs, which I very much doubt. More likely the absence of some other necessary constituent is the cause. But this is an almost unexplored field. Who will undertake it?

JOSHUA FRANKLIN.

Clay Co., Ala.

COTTON SEED MEAL AS A FERTILIZER.

Editor Southern Planter:

The high fertilizing and feeding value of cotton seed meal makes it apparent that its utilization is a matter of great concern to all Southern farmers, for every time enough seed is sold from the farm to make the equivalent of a ton of cotton seed meal, from \$20 to \$25 worth of fertilizer is taken away which must be replaced in some form. If the seed were exchanged for the meal and fed on the farm, there is no reason why the farmer should not realize from \$20 to \$25 a ton for the meal as a foodstuff and from \$15 to \$20 a ton as a fertilizer, making it worth to him \$30 a ton and giving him two profits from the purchase of a single foodstuff.

A good many persons seem to have the idea that if cotton seed meal is first fed to live stock only a comparatively small amount of the mineral constituents will be available as plant food. This is an erroneous idea, for from 96 to 98 per cent. of the mineral matter will be voided in the case of beef cattle, and from 70 to 80 per cent. in the case of dairy cows. Therefore, if a sufficient amount of desirable absorbents is used in the stable so that the urine will be completely absorbed and preserved and the manure thus obtained be applied directly to the land and plowed under only a comparatively small amount of the fertilizing value of the meal will be lost.

Cotton seed meal furnishes organic nitrogen in the cheapest form obtainable from a commercial standpoint. The available nitrogen in nitrate of soda costs anywhere from 15 to 16 cents per pound, and it must also be used under special conditions and can not be mixed with phosphates and potash as in the case of cotton seed meal. Nitrate of soda can only profitably be applied to growing crops, whereas, the nitrogen in cotton seed meal can be applied in the fall if desirable and along with the phosphates and

potash, and as it is not readily leached away, it becomes available as the plant needs it. A ton of cotton seed meal contains about 134 pounds of nitrogen or 150 pounds of ammonia, which at 12.8 cents a pound would be worth \$19.20; 56 pounds of phosphoric acid, at 5 cents which would be worth \$2.80, and 36 pounds of potash, at 5.4 cents, which would be worth \$1.94, or a total of \$23.94 per ton. There is no other concentrate on the market which approaches cotton seed meal in fertilizing value.

Southern lands can not be expected to increase in fertility, much less maintain their present condition, unless there is returned to them in commercial form the equivalent of the fertilizer removed by farm crops. One of the easiest solutions of this problem lies in the more general utilization of cotton seed meal as a foodstuff and as the basis of commercial fertilizers to be used on the farm.

ANDREW M. SOULE, *Director.*

Experiment Station, Blacksburg, Va.

INOCULATING SOIL FOR LEGUMES.

Editor Southern Planter:

I note what you say to a correspondent in regard to the inoculation of soil for alfalfa by growing a crop of Burr clover. It has been found here that there is no more complete and certain way to inoculate the soil for alfalfa than by sowing Burr clover the season before. Or the inoculation can be made by getting soil from an old and successful alfalfa field. The pure cultures are by no means so successful. In Pennsylvania a farmer of prominence sowed a piece of land in alfalfa. On a strip all around the outer part of the plot he scattered soil from an old alfalfa field and on the interior he used the pure culture from the Department of Agriculture. To-day there is hardly a plant left on that part while on the border to which the soil was applied there is a very luxuriant growth well supplied with nodules. Even where the winters may be too cold for the Burr clover to survive—and on this point we have not yet been made sure, for the hardness of the plant here would seem to indicate that it may succeed further North—if it is sown in summer it will make enough fall growth to inoculate the soil, and it will do this far easier and cheaper, and in fact more effectively, than any laboratory culture. The soil where Melilotus or Sweet clover grows—and it is wild all over the South—is also effective in inoculating the soil for alfalfa. We have never known a failure where inoculated soil or the Burr clover has been used, but there are numberless failures of the

pure cultures. A firm that is making these cultures sent us recently two packages, one for Cow peas and the other for Garden peas. Inasmuch as in this climate Garden peas were over, and our old garden soil needs no inoculation, and there is hardly an acre in the South that is not already inoculated for the Cow pea, these packages are like sending coals to Newcastle, even if they were of any real value, which we very much doubt.

There has been such a wild exploitation of the "discovery" in the Department of Agriculture that pure cultures of these bacteria can be made and increased, though every bacteriologist has been making pure cultures of various bacteria for a generation, that many people have gotten into the notion that all they have to do to make their land rich is to get a little package of the bacteria and put them in the soil or on the seeds. The wildest sorts of romances about this wonderful "discovery" have been published in the popular magazines, and much harm will be done in discrediting scientific work, by reason of the many failures of the cultures to meet the great expectations of the readers of these fancy word pictures. There is doubtless value in the pure cultures where they are properly handled. But not one in ten will so handle them, and it is very unfortunate that the romance writers of the magazines got hold of the process, or that the Department of Agriculture allowed the stories to be printed under its approval. A little less anxiety to advertise its work would do the Department of Agriculture no harm. Demonstrated facts can be carried to the farmers through the bulletins of the Experiment Stations far better than in the illustrated magazines by writers who know nothing of what they write about and are only anxious to make a pretty and catching story, and get up a fad.

W. F. MASSEY,

Raleigh, N. C.

Editor Practical Farmer.

SOY BEANS.

Editor Southern Planter:

In regard to soja (soy) beans, Mr. Julian Ruffin is right as far as he goes, but they will improve the land for corn more than peas, and make a great deal more and better feed. I carried 75 lambs this winter with 85 ewes, and soja beans was my main grain and hay feed. I have raised soja beans for twelve or fifteen years.

J. B. LEE.

Hanover Co., Va.

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.

SILO EXPERIENCE.

The following are the conclusions reached as the result of several years' experiments at the Tennessee Experiment Station with silos and silage as a feed. We commend them to the attention of our readers. We endorse these conclusions heartily from personal knowledge and urge the building of a silo on every farm:

1. Silage can be utilized to advantage in every section of the country on account of the variety of crops from which it can be made and because it is an excellent substitute for grass in the winter or summer feeding of farm live stock.

2. Silage increases the carrying capacity of the land. Ordinarily from two to three acres of blue grass are required to carry a 1,000 pound steer for six months when gaining from 300 to 400 pounds. Four 800 pound steers were fed for 150 days on the product of less than an acre of land in the form of silage and gained 886 pounds during that period.

3. Silage may be made from a great variety of crops, as corn, sorghum, cow peas, soy beans, teosinte, Kafir corn and clover; but the first two are by far the most valuable.

4. As fine a quality of silage can be made from sorghum as from any other crop and there seems to be little difference between the feeding values of sorghum and corn silage for beef production.

5. Farmers who experience difficulty in making good silage either cut the crop too green or else have improperly constructed silos.

6. The average cost of a ton of silage from sorghum was \$1.41; from corn, \$2; from corn and sorghum, \$1.86, and from soy beans, \$2.83.

7. The yield of silage varies considerably with the distance of planting. Close planting gives the largest yield, but tends to produce a weak stalk, which makes the crop difficult to cultivate and harvest. Three feet is probably the most desirable distance to plant sorghum, corn, and corn and sorghum. If planted more than 3 feet apart the yield will be decreased; whereas, if planted in two foot rows, the cost of cultivation will be greater.

8. The cost of growing an acre of sorghum silage was \$19.48; of corn, \$14.92; corn and sorghum, \$19.14; soy beans, \$19.86.

9. Coker's Prolific and Virginia Ensilage are good varieties of corn to use for silage purposes and will make the largest yields when planted in three foot rows. These varieties required on an average 108 days to mature, and produced 7.15 tons per acre at a cost of \$2.21 per ton. Corn silage may be produced in a favorable year for about \$1.50 per ton, and in an unfavorable year for about \$2 per ton.

10. One of the best varieties of sorghum for silage purposes is Red Head. This is a stout variety and does not grow quite so tall as some others, but stands

up well. Eight pounds will plant an acre. The crop will mature in about 113 days.

11. Sorghum planted as a "second crop" will not yield more than eight to ten tons per acre, whereas, if planted as a first crop it will yield from twelve to twenty tons per acre. The lowest cost per ton from a first crop was \$1.15, and the highest \$1.78; from a second crop the cost was about \$2.80.

12. Red Head sorghum and Virginia Ensilage corn can be combined satisfactorily for the production of silage. They are best grown in three foot rows. The crop required 114 days to mature and gave an average yield of 10.4 tons, at a cost of \$1.85. The lowest cost was \$1.41 and the highest \$2.05. Combining these crops makes a better quality of silage, increases the yield and reduces the cost per ton as compared with corn alone.

13. Corn and sorghum both contain an excess of carbohydrates, and are deficient in protein. To correct this difficulty and balance the nutrients cow peas and other leguminous crops were grown with them. The peas were planted in the rows with the corn and sorghum, and while a casual inspection of the crop would indicate that a large per cent. of peas was obtained, a careful separation of the peas from the corn or sorghum shows that in no instance was there more than 15.1 per cent. of peas in the crop, and in some instances only 5 to 6 per cent.; so small a percentage as to have no material influence on the composition and feeding value of the silage. Corn and sorghum can be combined so that the resulting silage will consist of about equal percentages of each crop.

14. The Mammoth Yellow soy beans have been made into silage for two years. The average yield was 7.5 tons. About a half bushel of seed should be used per acre and the crop will require 138 days to mature. The cost of a ton of silage was \$2.83. It was black, strong in odor and not palatable to cattle. Our experience does not favor the making of silage from soy beans alone. If the crop can be satisfactorily mixed with corn or sorghum it would make an excellent quality of silage. The difficulty is to mix it economically.

15. Heavy applications of fertilizers increased the cost of the crop and in some instances did not produce a large enough yield in proportion to make them profitable. A small application of phosphate and potash each year will be more profitable than large applications made at longer intervals.

16. An application of from 100 to 150 pounds of high grade acid phosphate and from 25 to 50 pounds of muriate of potash will often prove profitable. No better fertilizer can be had than farm yard manure, and five tons per acre each year will prove more effective than ten or fifteen tons at a single application.

17. The value of fertilizer will be influenced by the crop season. In a dry year it will not prove so effective as in a wet year.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

Successional crops of Sweet corn, Lima beans, Pole beans and Navy beans may be planted all through this month at intervals of a few days and will keep up the supply of these vegetables for the table up to the time of frost. Black Eye peas may also yet be planted. Cumubers for pickles not already planted should be got in at once and the earlier sown crop be thinned out to a stand and be kept growing by cultivation. Sweet potato plants should be set out at once if not already done. Cuttings should be taken from the sweet potato vines and be set out. These will make better seed for raising plants next year than the slips and will be free from the black rot fungus. Cut off the ends of the vines with three or four leaves on them and bury all except the tip end with two leaves. They will soon root if kept moist.

Potato sets for making the winter using crop should now be planted. The great bulk of this crop is raised from sets that have been kept in cold storage up to this time. The sets as soon as received should be spread out in a shady warm place and will soon put out sprouts and should then be set. There are also two or three varieties of these late potatoes grown in this State which make good crops. Several growers advertise them in our June and this issue. In growing this late crop the rows should be plowed out deep and the fertilizer be mixed with the soil in the bottom of the rows and the sets be then planted and only be lightly covered with soil. As the plants make their appearance the soil should be gradually worked into the rows until they are filled and then soil should be kept level during cultivation.

The second crop of Irish potatoes should be planted in this month and early in August. This crop is raised from sets selected when digging the crop planted in January and February. It is a safe crop to plant in Tidewater Virginia and Eastern North Carolina but not West of this city. The tubers raised make better seed for the early crop than Northern grown sets and there is always a large demand for this seed. The sets selected should be about as large as a small egg and they should be planted whole except that a slip should be cut off the end. The sets should be spread out in a shady place to green and sprout. Do not plant until they are sprouted. A little fine rich soil or woods mould spread on them after they have greened will induce sprouting. Plow the rows out deep and mix the fer-

tilizer with the soil in the bottom of the rows and then plant the sets and just cover with soil. As the plants grow work the soil into the rows and when full keep level during cultivation.

Celery plants should be thinned out as they become large enough to handle and the thinnings be planted out in good soil about four inches apart to make plants for setting out in the rows next month. This secures good stocky plants which are the ones needed. If the plants become drawn or spindling clip off part of the tops with shears. The land should be got ready for the setting out of the plants where they are to mature. Make the soil fine and deep and as rich as possible. Well rotted farm yard manure supplemented with a rich fertilizer should be used. A mixture made up of 300 pounds of nitrate of soda, 300 pounds of fish scrap, 600 pounds of acid phosphate and 300 pounds of muriate of potash to make a ton will give about the right proportion of ammonia phosphoric acid and potash for the crop. Use from 500 to 700 pounds of this mixture per acre.

Cabbage and Broccoli seed for the fall crop should be sown towards the end of the month. Select a moist shady place for the seed bed and dust the young plants with tobacco dust to keep off the bugs. These fall crops can be successfully grown if the plants are not raised too early.

We have almost daily enquiries for remedies to destroy worms, caterpillars and bugs on the growing crops. It is impossible for us to reply to all these. If our subscribers would only act upon our advice and keep the March issue of the PLANTER at hand they would find in it advice on how to deal with all these pests. Always look in the Spray Calendar of the March issue before writing us and thus save loss of time, trouble and disappointment.

Keep the cultivator running in all growing crops to keep down weeds and encourage growth.

As crops are removed plow the land and sow Crimson clover or Hairy vetch to improve it and conserve fertility. Don't grow a crop of weeds, there is no profit in it but much loss.

In our last issue we gave advice as to budding trees. This is the time to do the work.

FRUIT PROSPECTS IN VIRGINIA.

In reply to your request for report on fruit prospects: Here in Albemarle county, Va., in the fruit section along the Blue Ridge, the outlook is most promising for a record crop of peaches and plums; strawberries, now over, were considerably cut short by frost at blooming time, and subsequent dry weather. Cherries, now nearly all gathered, have been below the average. Pears are generally light. Apples were thought to be dropping off badly a month ago, but now this is over there is a good showing on the trees in most orchards. In my own I have a large crop of Winesaps as well as of all other varieties on the trees. I consider prospects here generally are very bright.

WALTER WHATELY.

Crozet, Albemarle Co., Va.

In my immediate section plums and peaches are a full crop. Apples were seriously damaged by the low temperature in April. Winesap and Ben Davis were cut to one-fourth of a full crop while York Imperial suffered much less and Albemarle pippin was practically unharmed. Taking the varieties as a whole I would estimate from one-third to one-half of a full crop of apples and a full crop of all stone fruit.

Bedford Co., Va.

GEO. E. MURRELL.

Our apple crop in this section of the Valley of Virginia is very promising indeed. York Imperials are smooth and up to present show little or no sign of the codling moth. During the last three days we had fine rains and the drouth is over. We never had better prospects for a peach crop, and in fact all pitted fruits. The raspberry crop is an unusually large one and of superior quality. Many of our young orchards are coming into bearing.

Augusta Co., Va.

D. O'ROCK.

In our mountain section the fruit crop is decidedly promising. Peaches are very abundant, Comets (Bil-yeaux) especially. A very heavy crop of Albemarle Pippins; red apples good, except that in some localities Winesaps dropped badly. A fair crop of plums. Cherries have been gathered and in some parts turned out well. My advice is that Virginia apples will be in demand and should bring a good price.

Albemarle Co., Va.

SAM'L B. WOODS.

GRUB WORMS IN STRAWBERRY BEDS.

Editor Southern Planter:

In your May number, page 387, a subscriber from Accomac county wants a remedy for grub worms in

young strawberry bed. I think if he will put some Pekin ducks in his strawberry patch or field they will destroy all the grub worms.

I put four Pekin ducks on one-twelfth of an acre of lawn grass that was badly infested with grub worms for two years, they have practically destroyed the grub worms and we have this year ten times as much grass as at any time in the two last years.

Of course your subscriber will keep the ducks off the strawberries when bearing.

Also note that ducks are a most excellent thing to keep in a henry where young chickens are bothered with gapes.

G. B. ROBERTSON.

Nansemond Co., Va.

CANTELOUPE GROWING IN THE SOUTH.

Editor Southern Planter:

In the May number of your excellent paper I find the following statement in a communication from a subscriber from Kershaw county, S. C., which is calculated to mislead those inexperienced in the cultivation of canteloupes. The statement follows: "A canteloupe should never be planted in this section more than four or five years at the most. Whilst it will increase in size it loses that delicate and sweet flavor you usually find in canteloupes raised from Northern grown seed."

Now, Mr. Editor, this is directly in conflict with my experience and observation, extending over a period of nearly fifty years. I planted the same variety from seed which I saved from selected melons used on my table for *twenty-nine years*, and bred them up to a standard which was pronounced by all who ate them as perfect. I have not planted a purchased seed, except for experiment, in forty years. My home grown seed has been repeatedly planted in variety tests by Experiment Station horticulturists, and the melons grown from it have uniformly been classed "best." *I have no seed for sale.*

I have gathered 13,000 merchantable melons per acre. The last season was not a favorable one, and yet I gathered from the patch in my garden at the rate of 10,000 per acre. I fertilize *very* heavily broadcast and in the drill and sow the seed continuously in drills, five feet apart, and thin to one plant every fifteen inches. I would not have noticed the statement of your correspondent but for the fact that it might induce many Southern gardeners to abandon saving their own seed. We are spending vast sums annually for seed which should be saved at home.

J. S. NEWMAN, Director.

Department of Agriculture, Clemson College, S. C.

Live Stock and Dairy.

MORE FINE JERSEYS FOR VIRGINIA.

In the May issue Messrs. T. S. Cooper & Son, of Coopersburg, Pa., the well known importers of pure bred Jerseys, announced their annual sale. This came off on the 30th May and was in every feature a pronounced success. The prices realized were record breakers and the animals themselves were of the very highest type of quality and fitness. The following is a summary and averages:

	Average.
43 cows, 3 years old and over.....	\$32,225 \$ 750.10
11 females, 2 yrs. old & under 3, brought.....	4,030 366.36
22 yearling heifers brought.....	9,855 447.90
11 heifer calves brought.....	3,650 331.81
2 bulls, 2 years old and over, brought....	10,775 5,387.50
5 yearling bulls brought.....	1,535 307.00
9 bull calves brought.....	1,020 113.33

103 head Jerseys (all were sold) brought, \$63,120 \$621.55

Mr. A. M. Bowman, of Bowmont Farms, Salem, Va., a regular advertiser in our columns, was a large

Eminent, which was sold for \$10,000, the highest price ever paid for a Jersey bull, to Geo. E. Peer. We learn that later he purchased the bull by private treaty at a substantial advance on the sale price. With such stock as Mr. Bowman now has in his herd there can be no excuse for Southern buyers going North for Jerseys, and we trust that his enterprise and spirit will be well rewarded by the patronage of Southern buyers.

THE GREAT JERSEY BULL EMINENT 2d, P. 2532, H. C.

Sold for \$10,000 at T. S. Cooper's sale, May 30th, 1905, now owned by Bowmont Farms, Salem, Va., sired by Golden Fern's Lad, P. 2160, H. C.

Dam, Eminence, F. 7124, H. C., Sweetpakes Winner, North Club Show, 1892. Dam of Little Eminence, 122506 A. J. C. C., 21 lbs, 6 ozs., a famous prize winner. Also dam of Eminent and Eminent 2nd, two famous sires.

Eminent 2d is said to be the best son of Golden Fern's Lad. He has proved himself one of the most



buyer, adding to his already fine herd some of the best stock offered. He bought 10 head at an average price of \$733. Amongst these was Reminder's Duchess, an 8 year old cow for which he gave \$2,525. Mr. Ralph Cooper said she was the best cow in the herd. He also bought Eminent's Evasion, a 4 year old cow, for which he gave \$1,500, and three Flying Fox heifers, 4 and 3 years old, respectively, for \$750 each. Mr. Bowman bid up to \$8,500 for the great bull

successful sires the Island has had for many years.

He won the States' Prize over the Island of £50 (\$250) in 1901 and 1902, shown with five of his registered daughters in milk—a prize considered of great value on the Island, or anywhere else. He also won the Goddington Purse over the Island in 1902.

Six of his daughters sold at same sale at an average of \$679.16.

Since writing the foregoing we have received from

Mr. Bowman a letter in which he confirms the purchase of the bull Eminent and sends us a picture of the animal which we gladly publish. A writer in the Jersey Bulletin giving an account of Mr. Cooper's sale in referring to Eminent 2d, says: "When that grand bull Eminent 2d walked around the ring with all the grandeur of a knight of old, followed by six of his daughters, the sight was an imposing one." Mr. Bowman says that his herd now numbers over 100 head, including a large number of the highest priced cows ever sold at public sale, and with Eminent 2d at the head of the herd cannot be surpassed by any Jersey herd in the world. We are proud to announce this fact in behalf of the State of Virginia. The great victory won by the Jerseys over all dairy breeds in the dairy demonstration at the St. Louis Exposition has caused such a greatly increased demand for gilt edged cream and butter in all sections as to give a great impetus to the Jersey cattle business and this increased demand was so pressing on the Bowmont herd for breeding animals of the highest type that Mr. Bowman was determined to secure the greatest bull known to the breed to head his herd, hence the purchase of Eminent 2d.

TEXAS FEVER TICKS.

We are given to understand that the Federal authorities through the medium of the Veterinary Division of the Department of Agriculture has decided to assist the Southern States authorities in the work of exterminating the Texas fever ticks in the several States where their presence now causes the loss of thousands of dollars directly every year by the deaths of cattle and other thousands of dollars indirectly by the necessity of imposing a quarantine against all Southern cattle and thus limiting shipments of stock to the best markets and causing discrimination in those markets against Southern cattle. With proper co-operation between the Federal and State authorities and with the assistance of Southern farmers and Southern Live Stock Associations this tick can be readily driven out of Virginia and North Carolina and these two States be permanently got outside the quarantine line. States further South will require more time but with perseverance even these can also be rid of the pest in a few years. We would urgently press upon farmers and stock keepers the importance of close co-operation and support of the Federal and State authorities in the work of exterminating the ticks. Some self-denial and inconvenience will have to be submitted to for a time but the accomplishment of the object aimed at will amply compensate for all

this. With Texas fever ticks exterminated millions of dollars will be added to the value of Southern cattle.

THE HORN FLY.

In our last issue we drew attention to a recent Bulletin of the Virginia Experiment Station dealing with this subject and advised stock owners to send for the same. Dr. Spencer, the author of the Bulletin, writes us that an error occurs in the Bulletin which he desires that we correct. On page 77 from the tenth line from the bottom should read: "The solution kills them during the animals' passage through the spray which requires about five minutes of time. Fifteen gallons of diluted solution (representing three-eighths of a pound of yellow soap and one and one-half gallons of kerosene oil) is required to treat 100 cattle when accustomed to the operation. Our cows pass through readily at the rate of 25 per minute while beef cattle require a little more time."

RATIONS FOR HORSES.

Editor Southern Planter:

The subject of feeding horses and mules is one of interest and concern to every farmer. In some respects the horse is more difficult to feed than any other class of animals kept on the farm because the digestive capacity is not nearly so great as in that of ruminating animals and the kind of food needed to secure the best results is of necessity of a different character. The horse is chiefly valuable for his muscular development which enables him to perform a large amount of hard work, and therefore requires that he should be fed a ration containing a good deal of protein food and ash material in order that the needs of his body may be properly supplied. It is a comparatively easy matter to overfeed a horse, and frequently the attempt is made to stuff them full of hay and other coarse rough fodders, resulting in an abnormal development of the barrel which spoils the general appearance of the animal, and in a measure impairs the digestion, for of course, rough food low in nutrients overtaxes the digestive system and detracts from the vitality and the power to perform fatiguing work for long periods.

The question of balanced rations for beef and dairy cattle has received a great deal of attention, but not so with horses. Comparatively few feeding investigations have been made with this class of animals; just why it is hard to say. Of course, it is much more difficult to feed the horse experimentally be-

cause of the great variety of work which he is called on to perform, and in order to get satisfactory comparative results, it is necessary, for example, that several animals should be called on to perform the same kind of work each day. Then, possibly the feeding of horses in some senses is conducted on a more intelligent basis than with other classes of stock, for the horse has always been more or less the associate of man and has received more consideration and attention on that account than cattle, sheep or swine. Finally, the feeding of beef and dairy cattle has been looked upon as a matter of financial importance and a means to an end, whereas, the idea of saving food through the use of a proper balanced ration for horses thus enabling them to do more work with greater ease is a matter which has not received serious attention in the past.

There is another matter which concerns the horse and cattle feeder very closely and that is the large amount of purchased food now used to supplement the rations ordinarily fed. Corn naturally forms the basis of the grain ration used for horses. This is not surprising because it is more universally grown than any other concentrate, and experiments made both in this country and in Europe show clearly that from one-half to two-thirds of the ration may properly consist of corn for mature horses and mules. It is a mistake, however, to feed corn exclusively to horses for more reasons than one. It is a heating and fattening food and not well suited on that account for feeding in summer. Besides that, it does not contain as much ash material nor as much protein as is desirable. The horse is naturally of a more or less nervous temperament and the nerves are chiefly nourished by the protein contained in the food. A horse to do good and effective work must possess spirit. It is all a mistake to suppose that a horse which is used every day and expected to do hard work must of necessity be depressed and thin and poor. While it is hard to keep horses performing severe labor in good condition, better attention to the rations fed would often effect this purpose, and it is certain that the condition of the average work horse could be vastly improved by a better blending of the ration and the feeding of more protein food to tone up the nervous system and maintain a sufficient amount of spirit.

The general use of corn has arisen from several reasons. First, its abundance; second, the belief that it will not pay to utilize other foodstuffs; third, the idea that if other foodstuffs are utilized they must be purchased; fourth, because horses will exist and do work on corn. Now, as a matter of fact, an animal may be maintained on a great variety of

foodstuffs which are not well suited to its needs. It will not, however, perform the labor as easily as if a better combination of foodstuffs are used, and in some instances it will fail to perform its proper functions altogether as in the case of a dairy cow which is fed on a dry ration deficient in protein. She will of necessity fall off in milk flow and dry up long before she would do so if fed a normal ration. It is not necessary to stretch the imagination to see that the horse improperly fed for similar reasons will not be able to perform his natural quota of work and will wear out at a much earlier date. For these reasons, which are sound and founded on the best practice, it is very undesirable to make corn the exclusive grain fed to horses. A ration consisting of one-third corn, one-third oats and one-third barley or bran will be superior in every way to corn alone. Then, it will often happen that a portion of the corn can be sold at a good price and replaced by some form of protein food that will more nearly balance the ration for horses. For instance, wheat bran forms an admirable substitute for oats, barley or corn.

Then, there is another way in which the ration may be vastly improved for horses without purchasing large supplies of such expensive concentrates as bran and oats. Where alfalfa, clover, or pea vine or soy bean hay can be grown or purchased in large quantities it can be utilized to supply part of the protein needed in the ration, the corn can be cut down somewhat and thus made to go further and the horse supplied with foods better suited to his needs. The value of suitable forms of roughness in feeding horses is not generally appreciated; for that matter is not appreciated as it should be with any class of live stock. It was thought for a long time that by far the larger part of the nutrients and the chief part of the protein in a ration must be provided through concentrates. It is now generally recognized that the legumes mentioned above can often be utilized for this purpose, thus reducing the cost of the daily ration essentially and utilizing forms of roughness which can be grown on every farm at a moderate cost. With corn selling at 50 cents a bushel, this is a matter of great importance to the farmer. There is a limit to the amount of protein that can be added to a ration through the utilization of leguminous crops. For example, a horse should have some Timothy hay, shredded stover and straw, or such other forms of food as may be available on the farm. By limiting the amount of this class of food given, however, he will eat with relish as much as ten pounds of clover, alfalfa or cow pea hay. This will supply him with

the protein equivalent contained in 3 to 6 pounds of wheat bran and the substitution will be satisfactory as well. Now, as a matter of fact, a ton of hay can be made from any of the crops mentioned at a cost of from \$3 to \$5, and a ton and a half to two tons will as a rule provide as much protein as is contained in a ton of wheat bran or oats at a cost of \$20 to \$30 per ton. The importance, therefore, of growing a larger per cent. of leguminous crops and adding them to the ration of horses is apparent.

There are some who will object to the feeding of clover hay to horses. Clover hay, or that obtained from any other legume, can be fed with safety, provided it is clean and free from dust. Hay that has been rained on and is dirty should not be fed to horses as it is likely to have an undesirable effect on the respiratory organs, though as a rule, troubles of the throat and windpipe are hereditary. By the proper utilization of such leguminous crops as can be grown on the farm, the quality of the ration for horses may be improved very considerably and the cost of daily maintenance lessened.

Where leguminous crops are not available, protein can often be furnished to balance up the corn ration through the use of cotton seed meal. From one and one-half to two and one-half pounds per day may be fed. As a rule, it takes horses some time to become accustomed to this food, but if it can be sprinkled over silage or other succulent food, they will generally eat it with relish, and when they become accustomed to it grow very fond of it. Cotton seed meal, protein content considered, can be purchased at a much lower relative cost than either bran or oats. Therefore, it is economy to use it. In fact, it is surprising that a foodstuff of such merit should not have been fed more extensively to horses and mules in the South. There has been a belief, however, that it would be injurious, but experiments have now been made on such a large and convincing scale that there is no longer reason for this belief.

Another means of furnishing protein to a ration in a concentrated form is through the use of tankage and dried blood. These have been fed to some extent to horses at the rate of, say one pound per head per day. Large quantities should not be fed, of course. The results have been on the whole rather favorable, though further tests are needed to establish the real value of these by-products of the slaughter houses.

Another food which may be utilized to advantage for horses is silage. It should not be fed in large quantities, however, but when used in moderation it will give satisfaction and provides an ideal way for improving the coat of the horse and keeping the di-

gestive system in good condition during the winter months when grass is not available. Meal can also be mixed with the silage to good advantage and the whole mass will be eaten up clean and more thoroughly masticated than where the meal is fed alone. Not more than from 10 to 20 pounds of silage per day should be fed to horses and mules; 10 pounds, say, when the animals are at moderate work and 20 pounds possibly when they are standing in the stable. Silage fed in too large quantities is too bulky a food for the horse which only has one stomach of moderate capacity, and then it is claimed by some that the slightly acid nature of silage tends to upset the digestion when fed in excessive quantity.

Another cheap form of roughness which may be utilized to replace a part of the Timothy hay so generally fed to horses is corn stover. Two tons of well made and cured corn stover are certainly equal if not superior to a ton of Timothy hay in feeding value. Timothy hay of itself is not a rich food; in fact, does not compare favorably with clover and other legumes so far as feeding nutrients and digestibility are concerned. Corn stover can thus be fed to advantage to horses and mules during the winter season when they are not required to do hard work. It should not be fed in excessive quantities however; 10 to 15 pounds a day with some good hay being sufficient. Where stover is used it is desirable of course to feed a leguminous hay, such as cow peas, alfalfa or soy beans provide. Oat hay provides another very fine food for horses and can be produced in considerable quantities in all sections of the country. In the North it can be made from spring sown oats; in the South from winter sown oats. The same results will practically be obtained from cutting the oats for hay and feeding, while the protein and nutrients which eventually go into the grain are distributed through the straw. Many people imagine that if the oats are cut and the hay and grain fed separately that much better results will be obtained. This is not a clearly established fact by any means and there is reason to believe that the hay will prove as efficient fed the other way. Clover and Timothy can be combined in providing a roughness for horses, and it would always be better to feed clover and Timothy together rather than alone. Clover and the other leguminous hays mentioned are of particular importance for young stock where the demand for protein food owing to the rapid growth of bone and muscle is of vital concern.

It thus appears from a hasty review of the subject that there are several forms of roughness which can be utilized to provide protein for horses to piece out

the ration of corn so generally used, and at the same time improve its quality, making the food more nearly meet the requirements of the animal body. Corn, bran and oats are all excellent foods, but cotton seed meal, corn and cob meal, and hay from the legumes provide a more economical ration than is often used for horses and mules.

ANDREW M. SOULE,
Dean and Director.

Virginia Experiment Station.

ADVANTAGES OF HEREFORDS.

Editor Southern Planter:

A combination of the desirable qualities is what we are all striving for. It is not a quality of an entirely different nature for which we are breeding, but rather the intensifying and improving of those good qualities present in foundation stock.

The Hereford is not only a grand type of hardy, uniform, early maturing, producers and butchers' beast, but he has compelled breeders of other breeds to copy his type.

The producer has learned that it is much more profitable to rear a uniform type of cattle that will fatten and go to market at an early age from calves up, the butcher has learned that the young, well matured, light boned, thick fleshed cattle dress a larger per cent., of high priced beef, with less tallow and offal; and the consumer has learned that the roasts and steaks from the young cattle are much more juicy and tender than from the older, coarser cattle.

The Hereford being short on the leg, wide in the rib, straight on the back, deep and wide in the chest, with a short neck, short broad head, thick on the back and loin, rather light of bone and very compact must be an early maturer, easy feeder and very hardy.

The breed has an outside protection of a good coat of hair, growing on a thick hide, making it less susceptible to climatic changes than any other breed and the animals resist the flies and heat of the summer season better and apparently suffer little, while for the same reason they withstand the severe cold of winter equally well.

The Herefords as a class are of a pleasant disposition, being easily handled and the bulls are very tractable, seldom possessing the tendency to sulk, often found in their sex.

The prepotency of Herefords is a strong point in their favor, which is affected neither by high feeding nor extremely poor feeding.

A sufficient quantity of milk to keep the calf fat is absolutely necessary, any more than this takes the flesh off the mother and gives serious trouble in car-

ing for her properly both when the calf is very young and at weaning time. The Hereford cows are hardy and the best of mothers, giving as a rule, sufficient milk to keep their calves in fine condition and spoiled udders and consequent failures to breed or to raise their calves are much less frequent in Herefords than some other breeds.

Cows will raise a calf every year almost without exception.

Another very important point is the ease with which they go through calving, the length of time being from one-half to four hours.

In some other breeds the cows will be from one-half to two or three days and will produce a calf perhaps but once in two years.

When cattle are found possessing these excellent characteristics, we feel sure we have the most desirable breed. All we ask in proof of these assertions, is for the reader to inspect a neighborhood where he finds the different breeds being raised under like conditions and unless he is prejudiced, he will choose the Hereford.

We know of many men who have tried other breeds and changed to the Herefords, but none who have tried the Hereford and changed to any other breed.

EDWARD G. BUTLER.

Clarke Co., Va. Sec'y Va. Hereford Assn.

We would suggest that this controversy over the two breeds—Angus and Herefords—should now take a rest. Each side has had full opportunity of being heard and doubtless the good points of the two breeds are now better known in the South than ever before. Let us hear something of the good points of other breeds adapted to the South, say Short Horns and Red Polls.—Ed.

SHEEP HUSBANDRY THE REMEDY FOR WASTED LANDS IN THE SOUTH.

Editor Southern Planter:

In the June number of your issue your correspondent "N," from Hanover county, Va., discusses the tenant question and the general mode of operations on rented farms in Virginia, and closes by saying: "If the lot of the tenant farmer in Eastern Virginia is a hard one, the lot of the landlord is certainly worse, for he loses money in his investment by the depreciation of his property, even if the rent should amount to a fair interest on the purchase price of the land. Occasionally the land will become so poor that tenants will turn it out entirely. It grows up in pine and after a generation the landlord finds himself pos-

sessed of timber land. * * * What is the remedy?"

Your correspondent in his article describes the condition of millions of acres of unprofitable and "turned out to rest" land of the South to be found in a stretch from the Potomac southward to Texas and in Arkansas, Kentucky and Tennessee south to the Gulf of Mexico. However, here and there through this vast region are some as intelligently and highly cultivated lands and profitable farms as are to be found anywhere in the United States, but it is a source of regret that these are only numerous enough to serve as illustrations showing what may be accomplished under the natural conditions of our soil and climate all through this vast stretch of our great country.

It is no surprise that a remedy is desired and called for. Why do we not have such a wail issuing from the other vast region of country commencing with Maine on the Atlantic and widening as it stretches westward over the Ohio and Mississippi to the Rocky Mountains and a thousand miles down the Western slope to the Pacific Ocean?

A brief answer is, "Because the farmers of these lands have continually kept stock (domestic animals of all kinds), to consume the products of the farms on the farms, thus returning the fertilizing elements to the lands."

Has the South done this? N.'s article above noted gives us an answer in the negative. Besides, the writer of this, within recent years has traveled over most of both sections and noted the conditions, and must affirm the same. If this be truth, then the agricultural policy maintained in the North and West answers N.'s question as a remedy for the South.

In Great Britain and some other parts of Europe where the rental conditions are reduced to a methodic system, the terms of most leases require so many animals to be kept by the tenant and all the feed stuffs raised on the farm to be fed on the place. It is often stated that so many sheep to the acre must be kept; they being regarded most favorably as improvers of the soil. Being a native of a Northwest county of West Virginia where sheep were numerous; in fact the principal stock kept, I grew up familiar with the sheep husbandry business; so that it was easy for me to succeed with it in the new West while there and I have found it fully as easy to succeed with them in the South since we commenced in the business here over three years ago.

My experience and observation here prompts me to answer the inquiry of Mr. N. and thousands of others in a similar fix and asking the same question.

"What is the remedy?" I reply, "Get more stock and better stock and with all your getting, get sheep, more and more sheep and better sheep and raise wool, abundance of wool to sell always for cash along with your cotton, and such a course will improve your farms and make the soil rich and richer, instead of poor and poorer."

Also, my experience with sheep here teaches me that it is "old-time bosh" to talk about sheep not doing well in the South. The South, taken as a whole, to-day is a far better country in which to introduce hundreds of thousands of sheep and carry on the business of wool growing successfully than the great West was when I went to it with them in 1872. Now the West is pocketing its millions of money from the business and the South — — — well the South is about 25 years behind and just waked up to ask, "What's the remedy?"

Here you have my remedy and I am practising what I preach. I say "Go and do likewise." Perhaps before next month's issue of the *PLANTER* my sheep will give me time enough to tell you something about how we are doing it.

Since writing the foregoing I have sold our wool to the Chatham Manufacturing Company, of Elkin, N. C., for 23 cents per pound for the American Merino wool and 25 cents per pound for the Delaine Merino; the fleeces of all averaging slightly over ten pounds per sheep, bringing over \$2.30 per head for wool alone.

Statesville, N. C.

SAMUEL ARCHER.

DORSET LAMBS AS WOOL PRODUCERS—A NEW OBJECTION TO DORSET SHEEP.

Editor Southern Planter:

Wool went to 35 cents this year and we all wanted more of it. It occurred to us that our fall Dorset lambs had good wool on them, so we decided to shear them. One ram lamb sheared 7 pounds, another 6½ pounds and a ewe lamb cut 6 pounds. The bunch averaged almost 4 pounds per head. How is this for the Dorsets? How it does make us fellows who have them smile!

How about a breed of sheep that will produce two crops of lambs in one year and the first crop of lambs will shear two fleeces in one year? I bought two ewe lambs in England last June that had just sheared 4 pounds. These lambs as yearlings sheared 9 pounds each this May. Two of our rams at Edgewood sheared 12 pounds and 13 pounds respectively. I want to show you their photos in these fleeces later.

Verily, the Dorsets are in the race on wool as well as on lambs.

Now I must tell you of a very serious objection (?) to the Dorsets that come under my personal observation last week. I bought a bunch of Dorsets in the Valley and when they reached our station I "phoned" for my Collie dog, expecting to ride in front out of the dust and let this dog bring the sheep on. (It was very dusty and I hate dust.) The dog came. The sheep were turned out of the stock pens and then the circus began. The whole bunch started for the dog and the dog went for them. It was great sport at the time and the numerous spectators at the station enjoyed it, but in ten minutes I saw that the dog would injure them. They fought him all round the pens and he was often right on their backs. I never saw such a thing in my life and I have been with sheep since I was six years old. Result: I had to get right down in the dust and drive those sheep home. No man wants such sheep as these, if you have them to drive! I recall a very funny incident of that dusty drive home. A ram lamb dropped back along the side of road and I sent the dog over to bring him on. When the dog ran over after him he walked up to the dog in a most comical way. The dog lunged at him catching him in the wool. The lamb only shut his eyes and straightened his back, as much as to say, "Scratch it, I like that."

I have heard people say Dorsets were dog proof. I am inclined to think this bunch is, but deliver me from them, if I have to drive them.

Marxellton, W. Va.

H. B. ARBUCKLE.

SHELTER FOR FATTENING STEERS.

In the fall of 1902, there was planned a series of experiments to test the comparative merits of indoor and outdoor feeding for fattening steers. These experiments have now extended through three seasons, upon practically the same plan. Twenty-four steers were divided into two lots as nearly equal as possible. One lot was fed in a large pen in the basement of the college barn, the other lot was fed in an open shed in a yard adjoining the barn. This shed was enclosed on the two ends and one side, leaving the open side towards the southeast.

During the first season, the lot fed in the shed produced a slightly smaller gain and ate somewhat more food than the one fed in the barn. During the second season, the lot in the barn again produced a larger gain but ate more food than the lot outside. During the first season, it required one and one-fifth pounds more feed to produce a pound of gain in the outside lot than in the barn lot. During the second

season, it required one and one-half pounds more feed to produce a pound of gain in the open shed than in the barn. During the third season, the two lots made practically the same gains, there being only one-half pound difference per steer and that in favor of the outside lot. The steers in the shed ate less feed during this season than the steers in the barn. During this season it required a quarter of a pound more feed to produce a pound of gain in the barn than outside.

During the first two seasons, the yard in which the open shed was located became very muddy from the trampling of the steers and on account of drainage from higher ground. Before the last season opened a part of this yard was given a coat of cinders which allowed it to be kept drier than during the previous seasons. This may account in part at least for the better showing made by the outside lot during the last experiment.

From records kept during these experiments, it appears that the temperature has very little to do with the gains. The large gains were made quite as often during the colder periods as during the warmer ones. In many cases it seems that the cold acts as a stimulant which results in greater gains. Even the steers outside sometimes made their largest gains during the coldest weather. The indications are that it is much more important to keep steers dry than to keep them warm, and that whatever advantage barn feeding may possess over outside feeding results not from the warmer but from the drier quarters.

Penn. Exp. Station.

T. I. MAIRES.

LORETTA D., CHAMPION COW, ST. LOUIS WORLD'S FAIR.

To the Jersey cow, Loretta D. 141708, belongs the high distinction of having been the "best cow of any breed" in the St. Louis Dairy Demonstration, both in Class A, for demonstrating the economic production of butter-fat and butter, and in Class B, for demonstrating the economic production of milk for all purposes. She was awarded diploma as champion cow in the test, diploma as first in best five cows of any breed, Class A, and diploma as first in best five cows of any breed, Class B. At the beginning of the test she was seven years and eight months old, and had been seventy-one days in milk. During the one hundred and twenty days of the test she produced 5802.7 pounds of milk, containing 280.161 pounds fat and 522.895 pounds solids not fat. The fat was officially estimated to equal 330.03 pounds of butter. From the date of her freshening to the end of the St. Louis test, April 10 to October 13, 1904, 187 days, she produced 9214.7 pounds milk, containing 416.64 pounds fat, or a daily average of 49.3 pounds milk, 2.23 pounds fat and 2.62 pounds butter.

Loretta D. was fed during the test 2171.5 pounds

alfalfa hay, 746.9 pounds cut alfalfa, 56 pounds clover hay, 1458 pounds corn silage, 446.5 pounds corn meal, 360.5 pounds bran, 150 pounds ground oats, 216.5 pounds oil meal, 51.5 pounds cotton seed meal, 463 pounds gluten feed, 195.5 pounds corn hearts, 94.5 pounds hominy feed, 58 pounds distiller's grains and 63 pounds rolled oats. Total feed, 2099 pounds grain, 4432.4 pounds hay, silage and alfalfa. This feed was valued at \$31.989, and in Class A the butter was valued at \$82.507, leaving a net profit of \$50.518. In Class B the value of total solids was \$99.735; and, deducting the value of feed as stated, the net profit is shown to have been \$67.746.

ARE CREAMERIES BENEFICIAL TO FARMERS?

Editor Southern Planter:

An exceedingly able writer in the *Country Gentleman* once said: "I think it was a great mistake when farmers permitted the manufacture of milk into butter and cheese, to leave the farm." It seemed to him that the four cents per pound charged by the creameries for making, for furnishing package, paying freight to market and selling, ought to be kept on the farm. The same process of reasoning would bring back to the farm the cards for carding wool, the "big wheels for spinning the rolls, or "bats" (as they were called), the reel for reeling the yarn from the spindle, the wheel for putting the yarn on the spools for the shuttle, the hand-loom for weaving the cloth, and the dye tub for coloring it. It would bring back to the barn the brake, the swingles, and hatchels for dressing flax, and into the house the little foot wheels for spinning the yarn to make linen sheets, shirts and pantaloons. The argument, if carried to its full extent, would reject all the great improvements of modern times, and lead us slowly back towards barbarism. Why did the farmers allow the carding machines, the spinning jacks and power looms of the woollen and cotton factories to drive them out of the business of making cloth? It was because the labor-saving machinery driven by steam or water power, and tended by skilled hands, could do the work so much cheaper and faster than it was possible to do it on the farm. They showed their wisdom by yielding to the inevitable, and arranging their business to suit the changed conditions.

Many farmers have allowed the manufacture of milk into butter and cheese for the same reasons; that, as a rule, it could be done better and cheaper by the factories. There is no question that people who are constantly doing but one thing become very expert in doing it. Some farmers and their wives can make as good butter as the creamery men, per-

haps better; but that all cannot do it is proved by the higher price which creamery butter brings in all the markets.

Nobody will dispute that business can be done on a large scale cheaper than on a small one. The man who churns, works, salts, packs and ships a thousand pounds of butter in one day can do it cheaper per pound than the man who turns the crank to churn but ten, although he may do some other work besides.

When machinery and the forces of nature can be employed to lessen human labor, it inevitably cheapens the product, and is a blessing to the producer, as well as the consumer.

Let us see how much the creamery men take out of the farmer's pockets. Previous to taking our cream to the creamery, we sent our butter to be sold by a commission merchant in New York. He obtained the price of creamery butter, but charged five per cent. for selling. If he got 30 cents per pound, it took one and one-half cents per pound to pay for his trouble. The freight on a fifty pound tub was 25 cents, which took a half a cent per pound for freight. For best white oak tubs holding fifty pounds, we had to pay fifty cents, which took a cent a pound for package, making altogether three cents per pound to be deducted from the price obtained for the butter, to say nothing about the cloth covering, the salt, tag and postage.

According to our experience, then, with private dairying, and now, as patrons of the creamery system, we received less than one cent per pound for all our labor for churning, salting, working, packing and shipping, and letter writing. The commission merchant to whom we formerly entrusted our butter was a stranger, and for ought we knew might become bankrupt when owing us a hundred dollars, more or less.

It is advisable for farmers to sell only the cream, and not the whole milk. Our creamery man preferred to buy the cream only, and we were perfectly willing to sell the cream only, which left us the skim milk for raising young pigs and calves, which need it to do well, and which we find it profitable to raise.

J. W. INGHAM.

The South needs the establishment of creameries badly. Not until we get them will our butter be able to command the top market price. The lack of uniformity in quality of product makes buyers wary in handling Southern butter.—ED.

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.

The Poultry Yard.

TURKEY RAISING.

Editor Southern Planter:

At this season of the year I always search the agricultural papers in the hopes of learning something about turkey raising and but rarely find anything definite on the subject.

Now the methods of many successful men with chickens are well known, and may be, at least approximately, followed by any one who chooses to read the papers.

Would it not be helpful if the successful turkey raisers all over the country would send in their experience?

I have raised turkeys about 12 years with more or less success, but I am by no means satisfied that I know the best methods.

Will not those who know tell us the story from start to finish?—how they select their breeding stock; how they care for them during the winter as well as during the laying season; how they care for the poults, etc.?

All who think about the matter at all know the absolute importance of vigorous stock. I never saw this better exemplified than a few years ago in my own flock. I had a nice lot of thoroughbred and grade Bronze turkeys, but lost my gobbler too late in the season to secure another good one, the only one I could get being small and ill-formed—manifestly weak. My eggs hatched fairly well, but I do not think I raised 20 per cent. of the turkeys hatched. That same spring I bought from Mr. S. B. Woods, of Charlottesville, Va., 9 M. B. eggs—one egg broken in transportation; one infertile; one poult crushed in nest; leaving six little—or I should say big—fellow to follow the old hen from the nest.

This hen, with her young ones, I put in the same lot with the other young turkeys, giving them exactly the same care and feed; but, unlike the others, every one of these lived and five of them were as fine turkeys as I have ever seen. The finest gobbler of that set I still own, his remarkable size, beauty and vigor having caused me to keep him several years against my better judgment.

I have never thought it best to house young turkeys closely—my coops are very open indeed—and if my turkeys are caught by a heavy rain near night some distance from the coops I let them stay out, believing that dragging through the wet grass is much worse for them than staying out in the rain all night.

Should the hens be in any way confined whilst the poults are small, or should they be let to range? This

is the time when I lose most. When I keep the hens tied the crows devour the poults; if I give them their liberty they go too far. This year I am trying a plan which I hope may be successful, but can't tell yet.

Will not Mr. Woods tell us how he raises turkeys, and as many others also as wish to help those less fortunate than themselves?

MRS. EDMUND R. TAYLOR.

Jefferson Co., W. Va.

Let us hear from successful turkey raisers on this subject. We are ready to contribute our experience. We have often raised 75 per cent. of those hatched.—Ed.

ENEMIES AND DISEASES.

We are now in the midst of summer and strange as it may appear to many the poultryman has more trouble to keep his flock healthy and laying during July and August than any other two months of the year. The egg yield may be a little better than October and November but the mortality is usually greater. Where young and old have free range many die in out of the way places and are never found except by accident. This is due to many causes. Vermin is to my mind the principal cause. Mites and lice are the cause of many deaths. Constant care and watchfulness are required to keep the flock free from these enemies. Spray the roosts and nests at least once each week during these two months. I prefer to use the kerosene emulsion at this season because it can be used with an ordinary sprinkling can and everything about the houses can be thoroughly saturated quickly and at small expense. I make it as follows: Take one-half pound bar of good soap, shave it into a kettle with four quarts of water. Let this come to the boiling point when the soap will be dissolved. Put two gallons of kerosene oil in a four gallon can or jar and pour the soap solution into it while boiling hot. Stir thoroughly until it is a white creamy mass. Then take one quart of this emulsion and nine quarts of water and spray or sprinkle everything about the houses once each week. This will kill every mite and louse that it touches. Dust all the males regularly every week with some good insect powder. This if thoroughly done will keep the flock free from these enemies.

Next on the list of enemies to poultry is dogs. They prowl about in the night and kill, maim and eat many chicks, mature fowls and destroy many nests

of eggs. Last year I had three W. H. Turkey hens killed and eaten and 45 eggs due to hatch in two days eaten and broken. Fortunately I caught the dog and held him for damages and made the owner pay. This year I have had two sittings of turkey eggs destroyed and many hen eggs but have not been fortunate enough to catch the dogs. I shall try another method next year. Hawks, owls, weasles, minks, opossums and foxes can usually be caught in traps or shot if a good gun is kept convenient. A good lock on each house and a good gun at the bedside with plenty of shells loaded with buckshot and a steady nerve and will to use it is the best protection I know of against the "*Genus Homo*" that robs hen roosts.

I have recently had some experience with an enemy to poultry that fortunately is very rare. This is the fiend in human form that strews poison where your birds will get it. I had forty young turkeys killed in one day by poison in the form of Paris green and the fact that the person was fined \$50 and costs is poor consolation to one who meets with such a loss. The fine cannot reimburse one for the loss of property and no amount of money could pay the loss of confidence in humanity and this is especially true when the person convicted of such a crime professes to be a follower of Him "who spake as never man spoke."

Sickness and disease are effects of certain causes. Remove the cause and the effect ceases. In breeding and handling poultry the ounce of prevention is worth much more than the pound of cure. Clean, sanitary houses, food and water are the best safeguards to health and thrift. Many nostrums are advertised for sick poultry. I have never had occasion to use any of them and would not pay \$1 per ton for any of them. Many of the poultry foods and chick feeds are by-products or waste products and are positively harmful. Given a good clean range, dry clean quarters, sound whole grains a very large per cent. of hens will die of old age and not of disease. If a hen becomes sluggish, her comb and wattles turn pale or dark colored, remove her from the flock, give her a dose of quinine, keep her warm and dry, keep her hungry a day or two and if she does not recover kill her and burn her. During the hot months of summer I give my flock a mash occasionally, composed of the ordinary feed stuff, bran, meal and meat scrap, to which is added one point of turpentine for 200 hens. Pour the turpentine on the dry feed and mix thoroughly, then add milk or water to make a crumbly mash and feed. I feed this to young and old. It acts on the liver and kidneys and cleanses

the system of intestinal parasites and improves the digestion. At moulting time I feed linseed meal daily at the rate of two pounds to 100 hens. Mix it into the mash.

For a general tonic I know of nothing better than Golden Seal and Ginger, an ounce of each to every four quarts of mash. Tincture of iron is also a good tonic, 10 to 15 drops to every quart of drinking water. Always give it fresh and in the morning.

I know by experience that it is a waste of time, energy and money to dose and doctor young chicks for any of their ailments. Keep them warm, clean and busy and if they do not thrive on good sound sweet feed drugs will not help them.

CAL HUSSELMAN.

Richmond, Va., Route 6.

CATCHING MINKS.

HOME-MADE TRAP—NO PATENT.

Editor Southern Planter:

A mink trap that never failed is made out of a box large enough to hold a chicken, say 15 inches high, 15 inches wide, and 24 inches long. At each end cut a hole four inches square and nail closely woven wire netting over—the kind used for plastering is the best. Next take two common wood rabbit traps, knock off the rear board of each and close the opening thus made with wire netting. Place the rabbit traps closely against the holes in the larger box, one on each side. The large box should have a sliding door at one side, so that a live chicken can be gotten in and out, and can be fed and watered. There should be no other holes in the box, and the door should fit tightly, so there will be no temptation for the mink to try to get at the chicken except through the traps, and these will afford ample ventilation for the chicken.

Of course the whole thing might be made in one piece, but it would be too heavy for convenience. When a trap is found sprung, move it away from the box and the captive mink can be seen through the wire netting. Slide a bag over the trap and dump the mink into it. Swing the bag against a wall and the mink will be killed without damaging the fur.

The live chicken and the fact that the mink can see his way clear through both traps and the box do the business. I caught seven of these chicken thieves in one season with such a trap. N.

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.

The Horse.

Lucy Montrose, Barlight and Helen Wilmer, the trio of trotters, by Kelly, that are owned by James Cox, of Belgravia Farm, Mt. Jackson, Va., are all doing nicely in the stable of George B. Hayes, Lexington, Ky. With but little work and handicapped by troubles incident to change of climate and shipment, I learn from Hayes that Lucy Montrose has worked a quarter in $35\frac{1}{2}$, a 2:22 gait, and that Barlight did the same distance in $36\frac{1}{2}$, a 2:26 rate of speed for the mile, which is quite pleasing. Barlight is a large horse, being over 16 hands high, but he has the gait and way of going that pleases Hayes, and the wide experience of that able reinsman, who developed the former famous mare Houri, 2:17 $\frac{1}{4}$ and many others of note, is ever to be reckoned on in his profession. In addition to these others of the get of Kelly are coming on and some of them are from mares of royal lineage. In the stud of W. J. Carter, at Manchester, Va., Kelly has been accorded generous patronage and the first crop of foals here from the loins of this elegant son of Electioneer and Esther are a grand lot truly.

Edward A. Tipton, head of the great sales firm of Fasig-Tipton Company, New York, through whose hands the most famous light harness horses of the world pass, predicts the greatest famine in trotters within the next few years that this country has ever known. His reason for this prediction is that nearly all the establishments which bred trotters and pacers on an extensive scale have quit the business, while comparatively few new ones have been started, so that where there were ten large trotting breeding establishments a few years ago there is not more than one to-day, and the number is diminishing every year. This condition is sure to cause an advance in prices of good horses.

Many improvements have been made and others are contemplated at Brookberry Farm, the fine old homestead of some 200 acres, near Manchester, in Chesterfield county, Va., recently purchased from the Warwick estate by Miss Elizabeth Bemiss, and in the management of which her brothers, Messrs. E. L. and S. H. Bemiss, are interested. The Messrs. Bemiss hail from New Orleans and are well pleased with climate and soil of Virginia. Poultry, cattle and horses are being bred at Brookberry. The latter division includes a couple of large formed bay mares, one bearing the name Dolly Manners and the other Molly Starks, and both have been mated with Kelly, 2:27.

a severe loss in the recent death, due probably to colic, of the handsome bay stallion Sir Red, No. 30057, by Red Wilkes, dam Hamite, dam of Granby, 2:19 $\frac{1}{2}$, by Hamlet. Sir Red had been owned but a short while by Mr. Broadus, having been purchased not long since from Joseph Lassiter, of this city. The stallion was just in the midst of a heavy stud season and many of the best mares in that section had been booked to the son of Red Wilkes, hence the loss is doubly severe.

In Violet, the brown mare, by Granby, 2:19 $\frac{1}{2}$, Dr. B. L. Reams, of this city, owns a well bred trotter. She was bred by W. S. Rogers, Jr., Lexington, Ky., and foaled 1890, and since passing to the ownership of Dr. Reams has produced some promising foals. Violet's dam was Viola Medium, 2:25, by Happy Medium, the sire of Nancy Hanks, 2:04; second dam the great brood mare Topsy Taylor, dam of the producing sire Storm King, 2:25 $\frac{1}{4}$, grand dam of several standard performers, by Norman, 2:25. Violet has been bred to Kelly, 2:27, this season and the cross is likely to be productive of both speed and race horse quality.

The Virginia circuit of horse shows is in full blast now and never was more generous patronage and support accorded this worthy enterprise. Here is a revised list of dates, quite handy for reference: Culpeper, July 4 and 5; Fredericksburg, July 12 and 13; Orange, July 25 and 26; Front Royal, July 27 and 28; Charlottesville, August 1 and 2; Staunton, August 8-10; Harrisonburg, August 15-17; Berryville, August 23 and 24; Warrenton, August 30 and 31; Lynchburg, October 3-6; Richmond, October 10-14; Norfolk, October 16-21.

The Inter-State Fair Association, of Lynchburg, Va., recently organized and since duly incorporated, is backed up by ample capital and will put forth strong efforts to hold a big fair and race meeting. The week of October 3-10, the week following the Roanoke Fair, will be the dates. An attractive speed program is being arranged, with purses aggregating close to \$5,000 for trotters, pacers and runners. The purses for harness horses will range from \$400 to \$50 each, while those for runners will be fully as liberal. Hon. Carter Glass is president of the Association, with F. A. Lovelock, secretary, while the race committee is made up of men prominent in business and financial circles like A. P. Craddock, chairman, C. M. Guggenheimer, R. H. T. Adams, Samuel T. Withers and others.

A. T. Broadus, Old Church, Va., has sustained

BROAD ROCK.

Questions and Answers.

CULTIVATING CORN—NEW LAND CROP—ANGORA GOATS.

1. How should corn be cultivated on land that is so stumpy as to make following with a two-horse plow very difficult? The land is well drained high land.

2. What would you advise me to do with newly cleared land, would it do well in corn? I do not want to grow tobacco, as I do not think it pays as well as other crops.

3. Do you think it would be wise for a young man with small means to attempt to raise Angora goats? There is a great deal of brush land here that can be bought very cheap. The land, however, is very poor and has no improvements on it.

Pittsylvania Co., Va.

A SUBSCRIBER.

1. The only way to cultivate corn in stumpy land is to use a single tooth cultivator drawn by one horse or to use a hoe to do the work.

2. Usually newly cleared land will not make very much of a crop the first year or till it has been thoroughly aerated by cultivation. It will, however, generally make as much in corn as in any other crop and the growing of this crop fits it to become in better condition for the production of crops another year.

3. On good brush land Angora goat raising is said to be a profitable business, but it is yet in too experimental a stage in this State for us to say positively that it will pay you to buy land of this character for this purpose. The raising of Angora goats, however, on such land, whether profitable in itself or not, will fit the land to become of value for the production of crops, probably cheaper than any other way, as they will certainly clear off the brush effectually. One subscriber of ours, who bought some grade Angoras, and turned them on to land of this character, says that he is perfectly satisfied with the experiment, even though he should not be able to get more for the goats and their products than he gave for them, as they have cleaned up his land cheaper than he ever had any cleaned up before.—Ed.

RENOVATING LAND AND GETTING RID OF SHEEP SOREL.

I have a 40 acre field upon which I have several times raised 1,100 bushels of wheat in the past 20 years. A clover and Timothy sod was broken last August, and seeded in wheat, and on examining it recently for the first time since last fall, I find it poorer in prospect than I have ever had. I have been troubled with sheep sorrel for some time, and in this field it is more destructive than I have ever seen it. It is all over the field and there are frequent large patches where it has entirely choked out the wheat. I do not think it can average over 10 or 12 bushels per acre.

I am thinking of trying the following method with a view to get rid of the sheep sorrel and other filth in the land:

Break up the stubble in due time after harvest, and seed in Scarlet clover, spreading 25 bushels Frederick county, Md., stone lime per acre. Turn in the Scarlet clover the following spring in time for corn planting (say by May 15th) using 250 or 300 pounds per acre of Baugn's raw bone. Second year seed Scarlet clover again (if not too late), when the corn is cut off, and repeat the same tillage and treatment for second year. When second crop of corn is removed seed to wheat and resume regular five field rotation. I should expect the two corn tillages to eradicate much of the filth, and the lime to correct the acid indicated by the sheep sorrel, while the raw bone ought to make the two successive corn crops less exhausting. I should be able to cover most of the field each spring with barnyard manure.

Will you kindly state in your questions and answers de-

partment whether such plan is advisable, especially whether a good stand of Scarlet clover could be expected by seeding after corn is cut off, say September 10th?

If my ideas are not practicable or judicious I will be indebted for any suggestion you may make.

Kent Co., Md.

J. A. PEARCE.

Whilst it is commonly believed that a growth of sheep sorrel is indicative of an acid condition of the soil and that only upon such soil will this weed flourish yet this is not so. We have seen sheep sorrel growing luxuriantly in an old lime kiln where there certainly could not be acidity. The acid in sheep sorrel is not the same as that injurious in the soil. The presence of the sheep sorrel is indicative more of lack of fertility in the soil than of acidity. It will always be found growing on thin poor soils whether acid or not. What you want to do is to induce fertility in the soil by a rotation of crops in which the legumes shall come on the land frequently, and in order to make these successful growths, use lime at the rate of from 25 to 50 bushels to the acre applied in the fall and then apply 300 or 400 pounds to the acre of acid phosphate and 25 to 50 pounds to the acre of muriate of potash a few weeks before seeding Cow peas or some other legume. If the leguminous crop makes a heavy growth it may be cut for hay, leaving a long stubble to be turned under for the benefit of the following crop, but if the crop be only light turn it all down and follow with Crimson clover 10 pounds to the acre with half a bushel of wheat, oats and Rye per acre. This crop should be turned under in May and be followed by corn in which Cow peas or Crimson clover should be seeded at the last working. The land should then grow wheat successfully again with the help of some bone meal, say 300 pounds to the acre or may be put into clover and grass for a year or two with advantage before being put into wheat again.—Ed.

STORING IRISH POTATOES AND ONIONS FOR WINTER.

Please give me some advise as to how to put up Irish potatoes for winter use on a dirt floor, and also how to keep onions for the winter market.

Halifax Co., Va.

A SUBSCRIBER.

You cannot make a success of storing the spring grown crop of Irish potatoes for winter use. The crop to store for winter should be planted this month. In this issue you will find information as to the planting of the crop. The tubers will mature in October or November, and can then be stored and kept all winter. They may be stored in a dry cellar, where the frost can be excluded and the temperature be kept uniform at about 35 to 40 degrees. They should be dry when stored, and all diseased or damaged ones be carefully picked out before storing, and then be covered over with straw. Do not store them more than three feet thick, and not in larger quantity than 50 bushels in one lot. If no cellar is convenient, they can be stored in pies out of doors on dry land. Lay down a bed of straw and then put the tubers in a round heap, running up to a point not over 50 bushels in a heap, and cover with six inches of straw, and on this put three or four inches of dry soil at first, and later add more if the winter is severe. Beat the soil compact and so that it will throw off the rain, and they will keep well.

Onions should be pulled when the tops are dying, and be

allowed to lie in the field to dry for about a day, and then be spread out thinly on slatted shelves in a cool, airy shed to cure out. When the tops are all dried and withered cut them off and store the bulbs on slatted shelves in a dry, airy room, where frost can be excluded. A temperature of about 40 degrees keeps them best.—Ed.

JOHNSON GRASS.

Will some one who has had experience with Johnson grass answer these questions and oblige? Can one seed it with success as late as 10th of July after winter oats are off? Will thick seeding smother out foul growth? Will water standing on field after a hard rain for three or four days kill it? Will several give their experience? G. A. G. Nansemond Co., Va.

The proper time to sow Johnson grass is in April or May. We should doubt its making a permanent stand sown as late as July. Sown thickly, say two bushels to the acre, it makes a heavy crop of hay, and will smother out other growths if the land is all adapted to its production and it is not very particular as to the character of land on which it grows. We do not think water standing on it for a few days would injure it.

We should be glad if some of our readers who have had experience with this grass would give the results of their experience.—Ed.

DISEASED PEACH TREES.

I had this spring on a slope in front of my house seven thrifty peach trees three years old. They blossomed full apparently in perfect condition, but a few days later the leaves commenced to wither and turn dark at the point, and within five days there was not a leaf left on any of them. I cut off the tops, but this did not save them, but when the twigs were two or three inches in length the new leaves withered like the old, and the trees are evidently dying. Can you tell me what this disease is or was?

C. J. HILLIER.

Spotsylvania Co., Va.

We suppose the disease which has killed your trees was peach yellows, though we have never before had a case reported to us so quickly fatal. Usually when attacked with this disease the trees die within two years. It is always fatal sooner or later, and no remedy seems to be of any avail. The only thing to do is to dig up and burn every part of the trees and not to plant other peach trees in the same ground for several years. As such a quick killing of trees is very unusual, it would be well for you to send part of one of the trees not already completely dead to Prof. Galloway, of the Bureau of Plant Industry, Department of Agriculture, Washington, and ask for his opinion and advice.—Ed.

HOG RAISING IN THE SOUTH.

Please give some suggestions as to raising about 200 hogs annually upon a farm well adapted, because of several lots with shade and water. The land produces all the grasses and grain, including peas. What is especially wanted is to know how best to fatten them without much corn.

S.

King William Co., Va.

On page 468 of the June issue you will find our advice on this subject.—Ed.

BUGS ON PUMPKINS—STORING CABBAGES FOR WINTER—DISEASE ON APPLE TREES.

1. I have a few hills of pumpkins raised from seed brought from Hungary, which are being destroyed by a striped bug. What can I do to get rid of them?

2. How can cabbages be saved for winter use?

3. My apple tree leaves turn yellow in July every year. The first symptoms of attack is a red spot or pimple on the leaf. What can I do to prevent this?

Lunenburg Co., Va.

JOHN GIRETH.

1. The bug infesting your melons is the striped melon bug. It is very difficult to get rid of. Dust the plants and around them with air slaked lime, in which a little kerosene has been mixed when the plants are wet with dew. Use very little kerosene or it will kill the plants, only sufficient to make the lime smell.

2. You should grow fall cabbages for winter use. Sow the seed this month or in August, and they should then make heads in November. These can be stored in pies like turnips out of doors covered with straw. The heads should be stored with the roots on root upward.

3. The apple trees suffer from leaf spot or blight. They should be frequently sprayed with Bordeaux mixture in spring.—Ed.

PLANT FOR NAME.

I enclose a branch of a new grass that has appeared on the farms in Madison county, Va., asking you to inform us, through your columns, what it is and what it for?

Mrs. REBECCA A. HENSLEY.

Madison Co., Va.

The Botanist of the Department of Agriculture says the plant is yellow sweet clover, or yellow melilot, *Melilotus officinalis*. There is also a white sweet clover, or white melilot, *Melilotus alba*, which is known to seedmen under the name, Bokhara. Both of these species were introduced from the old country, and although often regarded as weeds, they are rarely troublesome in cultivated fields, and so far as he is aware, never troublesome in land that is properly cultivated with a rotation of crops. They are both valuable honey plants, and the Bokhara clover is regarded as especially valuable for a soil renovator. They belong to the pea family, and, like clover, cow peas and alfalfa, they have the power of obtaining nitrogen from the air, and storing it in a form to be used by field crops. Stock may not usually relish the plants, but if they can be induced to eat the young plants, or to eat the hay, they usually acquire a taste for them. He would suggest salting the young plants, or the dried hay, to encourage stock to eat them. The plants contain coumarin, which is one of the elements of vanilla, and which gives the plant its peculiar, sweetish odor. This volatile oil is probably what stock dislike.

IMPROVING LAND WITH LEGUMINOUS CROPS.

I have five acres poor land sowed last fall in crimson clover and rye. Had only partial stand of rye and good stand clover, but it did not get high enough to cut. I want to turn both under for a seeding again, would July 1st be too soon to do so? I want to sow land in cow peas. Would not the peas shade clover enough to prevent sun killing? or would the peas do well any later than July 1st?

Hanover Co., Va.

N. M. WHITE.

The rye and crimson clover should have been turned under in May or early in June, and the cow peas have been sowed then. Much of the value of the rye and clover will have been lost by leaving it on the top until July. Whilst cow peas will make a crop seeded in July, they will rarely make as good crop as when seeded in May or June. We have known crimson clover to be seeded with cow peas in July and to make a stand, but this largely depends on what growth the cow peas make. If the crop be heavy the

clover is often smothered out." We think your best course, if you have not yet sown the cow peas, would be to plow and work the land fine this month, and then to sow at the end of the month or early in August, twelve pounds of crimson clover and three-fourths of a bushel of wheat, oats and rye mixed in equal parts per acre. This should then make a good cover for the land for the winter and fall and spring grazing, and a fine crop to turn down next May, or it can be cut for feed in spring, or be made into hay in May. To turn down the whole crop, however, will much more quickly improve the land.—Ed.

WILD ARTICHOKE—ALFALFA—CUTTING LOCUST CEDAR POSTS—NUT GRASS.

1. What is the best way to kill wild artichokes? I planted a young plum orchard on land which contained some, and they bother me terribly in the rows.

2. I sowed four acres of alfalfa last fall, and it is looking good, excepting a few spots where the drought last fall after seeding thinned it out. Can I get a stand without destroying the whole of it, and in what way?

3. What is the best time to cut locust and cedar fence posts?

4. I find on some of the Winesap and Yates trees the small fruit spurs dead. Do you suppose this is caused by the frost, or is it blight? They were not affected that way last year. What can I do for them?

5. Can nut grass be killed? If so, what is the best way? I have a small patch in my garden.

Surry Co., Va. CHARLES G. DEISSNER.

1. If you would turn your hogs into the orchard they will root out the artichokes, and not leave many to trouble you. If this is not feasible, the only way to get rid of them is by clean cultivation.

2. Whilst it is not altogether hopeless to endeavor to improve a stand of alfalfa by reseeding the missing patches, yet it is not a course we recommend, as it so often fails. If you have anything like a moderate stand, let it alone until fall, and then run over the field with disc harrow and thus split up the stools and then sow a few pounds more of inoculated seed. If you would also sow some inoculated soil over the whole field it would help to make the stand spread. If the stand be very thin it would be better to plow up and reseed in August.

3. The Chief of the Forestry Department advises cutting cedar and locust posts in the fall or winter, but says that good seasoning of the posts has more to do with their lasting than the time when they are cut.

4. We should think that the killing of the spurs was more likely to be the result of the severe winter than any disease, if the trees were healthy last year.

5. Nut grass is very difficult to kill. Nothing but clean cultivation, taking out every bit of root you can find, will get rid of it.—Ed.

CHURN.

I enclose cuts of churns. Will you please tell me if any are like the one recommended in the February number of the PLANTER?

The cuts numbered 2375 and 2376 on the circular sent are those of the Box and Barrel churns recommended in the article. The one is a square box, the other a barrel. Neither have any internal fittings. The separation of the butter from the cream is caused by concussion.—Ed.

DRAINING LAND.

I have a farm that has a light sandy soil, with a quicksand strata about two feet under the surface, and more or less spongy, and it is almost impossible to keep the ditches

open. I want to cover them. What would you advise to drain with? If with tiling, what will it cost per mile? My ditches are about ten feet deep and wide.

R. C. BAZEMORE.

If the flow of water through this land is so great as to necessitate drains ten feet deep and wide the cost of tiling or rather piping to carry this flow would be so high as to be absolutely prohibitive, so far as profit on the outlay is concerned. The least costly method of handling such a flow would be to put in wooden box drains, say a foot square, as near to each other as would keep the land dry. These wooden boxes, if put down deep enough to be always kept wet, would, even if made only of good heart pine, last for many years, and if of oak plank, would last for a lifetime. We were some time ago told by a farmer in this State that he had just pulled out some old plank drains which had been in twenty years and they were still sound.—Ed.

GRASS FOR NAME.

Enclosed please find sample of grass found in patches on my farm. Could the editor tell me its variety, as it makes an especially fine sod.

NORTHERNER.

Fauquier Co., Va.

The grass is an annual of no value whatever for a sod. It starts growth very early, seeds almost at once, and then dies out by June.—Ed.

COW PEAS.

Kindly give me, through your columns, the botanical and also the other common names of what we know in this section as the "Shiny Pea."

Middlesex Co., Va.

W. H. CALHOUN, JR.

The botanical name of the "Shiny Pea" is *Vigna Catjang*. It is simply one of the very numerous varieties of cow peas to be found with local names differing in nearly every county throughout the whole Southern States. Cow peas occur in every gradation of habit, from a compact, stocky, upright bush, having single stems a foot high, with very short lateral branches, to those with trailing runners, growing as flat upon the ground as sweet potato or melon vines, the prostrate stems 15 to 20 feet in length. The pods vary from 4 to 16 inches in length, and the peas are of every imaginable shade of white, yellow, green, pink, gray, brown, red, purple and black, of solid colors or variously mottled and speckled and of varying sizes and forms from large, kidney-shaped to little round ones smaller than the garden pea. New forms are constantly arising, due to variation in habit of growth, color of leaf, stem and pod, and the shape and color of the seed. The varieties most highly recommended for yield of hay or peas are the Black, Clay and Whippoorwill. The New Era is a variety recently introduced, which is very much more productive of peas than the older varieties, and matures in a much shorter time. The "Unknown" or "Wonderful" is a great producer of vines, but is not adapted for growth north of the James river for the production of seed.—Ed.

HOW TO INVEST \$600 ON THE FARM.

Please answer in your next issue the most profitable way to invest \$600 on the farm. I have a mare that broke her left fore leg between the ankle and hoof, would like to know if she will ever do to work again.

Greene Co., Va.

E. P. PENNINGTON.

How best to invest \$600 on a farm is a question which depends wholly upon the character of the farm and the particular line of farming followed. What is usually most needed on Southern farms is more and better bred live

stock, and better buildings to house them, so that there may be a greater production of farm-yard manure of better quality to put humus and bacterial life into the land, and thus obviate the necessity for the purchase of commercial fertilizer for the production of every crop. This being true, a profitable way to invest part of the money would be to buy a pure bred bull, a pure bred buck and a pure bred boar. The male animal being in all cases more than half of the herd or flock, such an investment of part of the money would quickly pay in the better quality of the stock bred, and the better return which these would make for the food eaten and the better prices for which they would sell. The animals should be housed in better buildings, and these should have concrete floors in order to conserve the liquid portion of the voidings, and thus make the manure made of more productive value. Money spent in this way pays well, not only in what it actually makes, but in what it saves. If by the use of this manure heavier crops could be made, and this would no doubt be so, and that without the necessity for using commercial fertilizer, then the money spent would return a good interest and save a heavy outlay which now has to come out of each crop raised. Of course, on some farms money could be profitably spent in draining wet land. On others the purchase of labor saving implements would be a wise investment, especially in these times of unsatisfactory labor conditions. These are only a few of the suggestions which we could make.

Whilst the mare will always be lame, it may be that she may be able to do some light work.—Ed.

TO GET RID OF SASSAFRAS.

I noticed in the March number of the PLANTER some one wanted to know how to get rid of sassafras.

I will give you my experience with it. I bought a farm ten years ago that was almost covered with it, so much so I would not take the time to have them grubbed up, but had the largest bushes cut down with an axe, then gave the land a good ploughing in the spring, and sowed in black peas. In the fall turned in the peas. Next spring planted in potatoes; when I dug the potatoes sowed in peas again; in the fall turned that crop of peas under, and I have not been bothered with the sassafras since.

In the April number is another inquiry, Will sassafras make good fence post?

I will also give my experience on that. Several years ago I found in my woods two or three tall, straight and beautiful trees, the heart was about twelve inches in diameter. I had them cut and split into fence posts; it split and looked as pretty as any poplar. I thought I had post that would last as long as I wanted them, but to my surprise I think every post rotted off at the ground in three years, while that above the ground was as solid as ever.

W. H. WILSON.

SEEDING CLOVER—ENGLISH VETCH.

I have a piece of clover badly mixed with white clover, and together they make a very poor stand. The clover was sowed in oats a year ago. I expect to turn under the growth soon and sow to peas. I should like to know what is the best time and way to get this back in clover, or clover and timothy mixed. The land was thin when first sowed to clover. When is the best time to sow the seed? I expect to turn the pea vines under this fall. When is the best time and way to sow English Vetch?

Weakley Co., Tenn.

R. B. HENDERS.

As the land is thin, and it is simply wasting seed to endeavor to grow clover on poor land, you should give it 300 or 400 pounds of acid phosphate and 50 pounds of muriate of potash to the acre before sowing the peas. As your

object seems to be to get the land back into clover as quickly as possible, we would cut this pea crop for hay in August, leaving a heavy stubble. This stubble we would at once plow down, and then apply twenty-five to fifty bushels of lime to the acre and harrow in lightly. After the land has laid for ten days to consolidate we would then apply 400 pounds of bone meal broadcast per acre, and sow 10 pounds of clover seed and one peck of timothy seed per acre and harrow in, or better still, sow the clover and timothy with a drill and then cover it well. Follow with a roller. This should give you a good stand. If in the spring either the clover or timothy appears thin, harrow lightly and sow more clover and timothy seed and roll again. Sow no grain with the clover or timothy.

English Vetch should be sown in September or October.—Ed.

WARBLES ON CATTLE.

I am astonished at the statements made by the editor on page 386 of the May issue of the SOUTHERN PLANTER, in which he attempts to reply to the letter of D. J. Walker, Jr., of Spotsylvania county, Va., in respect to what he calls wolves in his cows' back.

1. The gad fly deposits the egg from which the grub is hatched in the skin on the cow's back, and not in the stomach of the cow, as stated by the editor.

2. If Mr. Walker will simply sprinkle salt on his cows' back, say once each week, or whenever he salts his cows during summer, he will never have a single "wolf" or "warble" or "grub" in any of the backs of any of his cattle. Having been told this more than ten years ago by an old cattle man, I have followed this simple method ever since, and have never since found one single warble or grub in any of my cattle. The salt kills the eggs when deposited on the cow's back, and hence the absence of the "grub."

JOS. H. DILLARD.

Kanawha Co., W. Va.

Notwithstanding the astonishment of the writer of the above communication, we stand by the answer we gave as to warbles, commonly called wolves. We are supported in this opinion by the highest veterinary authority. Dr. Cooper Curtice says that some authorities say that the grub hatches on the backs of the animals and then burrows under the skin, but he says this is not so, as the grub cannot make its way into the skin that way, as it has no means of doing so. He says the grubs develop in the eggs wherever these are laid on the cattle, and that the cattle then lick them off and they are taken into the esophagus or gullet, and from thence make their way to the backs of the cattle. Whilst we have been familiar with these grubs in the backs of cattle ever since our boyhood days, now considerably over fifty years, we never heard of salt being a preventive of them, nor is it mentioned as being of service by any veterinary writer whose works we have consulted. It may be that it has an injurious effect on the eggs of the fly when it touches them, and so may destroy some of those laid on the backs of the animals, but as the eggs are laid not only on the backs but on other parts of the animals, it is not likely that it could be effectively used to get rid of the trouble.—Ed.

GRASS FOR NAME.

I send box containing one root or spear of grass, which I would like for you to examine and see if you can inform me what the name of same is. It is a grass that will grow almost anywhere, and is very hard indeed to get rid of when once it gets a start.

GEO. M. ANDERSON.

The grass is probably quack grass. Whilst it is very like Bermuda in the leaf, yet the root growth is much too

coarse and strong, and the locality where grown too far north, or perhaps we ought to say from too high an altitude to be likely to be Bermuda. If you will send us the seed stalk when it appears we can answer more definitely.—Ed.

PLANT FOR NAME—JAPAN CLOVER.

1. Enclosed herewith please find plant for name, and will the infected soil on which it grew do to inoculate land for vetch?

2. Is there any danger of Japan clover (or *Lespedeza striata*) becoming troublesome like Bermuda in cultivation, and does it improve the soil as other legumes?

Pamlico Co., N. C.

W. F. CAHOON.

1. The plant enclosed is wild vetch. The soil upon which it has been grown will make excellent material for inoculating land upon which to raise Hairy or English Vetch. Spread 100 or 200 pounds of the soil to the acre before seeding the vetch.

2. There is no danger of Japan clover becoming a nuisance or troublesome upon any land. It is an annual plant, renewing itself every year by self-seeding, and like all other legumes, valuable as an improver of the soil.—Ed.

SORGHUM FOR FEED—SOWING CORN.

1. Would sorghum be a safe feed cut and fed green to horses and cows?

2. Would it do to sow corn in every drill spout the same as wheat, or should it be sown in rows and cultivated for a green feed? Please answer in your next issue.

Augusta Co., Va.

E. F. HEATWOLE.

1. Green sorghum is a safe feed for horses and cows. Let it wilt for an hour after being cut before being fed to them, and commence to feed lightly till they become accustomed to it.

2. Corn makes better green feed or dry fodder when sown in rows and cultivated than when sown broadcast or drilled closely. When sown broadcast the forage made is usually very immature and watery and of little nutritive value.—Ed.

TEXAS FEVER TICKS.

Will you please give a remedy to get rid of cow ticks, which cause cattle to die of Texas fever? These ticks were brought here on cattle bought from North Carolina.

2. Will these ticks go from one pasture to another, the distance of two to three hundred yards?

3. Do these ticks stay on cattle during the winter months, or do they drop off in the fall?

DAVID T. HANCOCK.

Prince Edward Co., Va.

1. In numbers of issues of the *PLANTER* during the last two or three years we have entered very fully into the subject of dissemination of Texas fever by the tick, and would refer you to these articles, as the subject is one too lengthy to be discussed in reply to an enquiry.

The ticks drop from the cattle after they have become mature and pass the next stage of their life history in the ground. This they usually do early in the fall, and in the spring or early summer months the ticks climb up the grass and are conveyed in this way to the cattle grazing upon it, and at once inoculate the cattle with the germs of Texas fever. There is always danger of introducing this disease by turning cattle upon a pasture upon which cattle having fever ticks on them have grazed the previous year. If the pasture is kept free from cattle for a year, the ticks will die out, and no further risk will be run in turning cattle upon this land again. There is no way of getting these ticks from the cattle but by picking them off. Greas-

ing the legs and underparts of the cattle with fish oil or lard with a little kerosene mixed with it tends to prevent the ticks going on to the cattle, but there is no certainty about this being effectual in preventing the introduction of Texas fever.

2. The ticks will not travel many yards from the place where they have passed the second stage of their existence. It has been said by some of the authorities who have studied this closely that they will not cross even a narrow roadway.—Ed.

HIDE-BOUND CATTLE

Please tell me the cause and cure of hide-bound in cows. I have a cow that has been fed on pea vine hay all winter, and has kept in good order; has been sheltered good. The hide all over her back is tight, and where you can get it up and pull it will pop and crack like. I want to fatten this cow for beef, and I can't get her to eat.

Yadkin Co., N. C.

J. W. WOODHOUSE.

The probable cause of the hide-bound condition of your cow is that she is suffering from some disease of her digestive organs. Feeding on pea vine hay alone is very likely to have caused this condition. Whist pea vine hay is an excellent feed when mixed with other feed, it is not good to use alone. It is rich in protein or muscle-making matter, but not in carbo-hydrates, fat and heat making matter. To maintain health both of these are required in a ration.

Give the cow one pound of Epsom salts with a spoonful of ground ginger to act freely upon her bowels, then give the following powder: Powdered gentian, three ounces; powdered bicarbonate of potash, three ounces; powdered ginger, three ounces; powdered capsicum, one ounce.

Mix and divide into twelve powders, one of which should be given three times a day before feeding. Mix with a pint of water or whiskey and water. Let her have grass feed till she recovers her health, then put her on corn and feed for beef.—Ed.

CLOVER SEEDING.

Will you give me your advice as to sowing English clover in the fall for next summer's pasture, about what time it ought to be sowed, and how much to the acre, and whether it will pay or not?

SUBSCRIBER.

Wicomico Co., Md.

We always advise the sowing of clover in the fall in the South. August and September are the two best months. Prepare the land finely, give it 25 or 30 bushels of lime to the acre, drill the clover in or sow broadcast and cover well with the harrow, and put from 10 to 15 pounds of seed to the acre, and you should get a stand which the winter will not hurt. If you can top dress this with farm-yard manure in November it will greatly improve the growth.—Ed.

SUBSOILING.

I have a lot of land that I want to put in clover and timothy this fall, and another piece in orchard. The soil is a light, rich, sandy loam. Would it not be advisable to break up the subsoil with a "bull tongue" plow. If so, should I get a one or two horse plow, and to what depth should the ground be broken. I am a newcomer to the Eastern Shore from the West, and the oldest and best farmers here assure me that to break up this subsoil is a positive injury to the land. I presume that it has not been disturbed for a century, if ever?

J. W. MINER.

If the subsoil is a clay one or a hard-pan, break it with a two-horse subsoil plow as deep as you can. If it is a loose one, subsoiling will not help you. Southern farmers

are nearly all of them afraid of disturbing the soil below the first three or four inches, and as a result they fail to get good crops and are always trying to get out of this difficulty by applying a few hundred pounds of fertilizer to the acre, with no permanent benefit to the soil and little temporary profit to themselves. If they would plow deep, not all at once, but gaining an inch or two each year, break the subsoil deeply with a subsoil plow, grow leguminous crops and always keep the land covered with a crop winter and summer, they could soon have rich farms and make heavy crops.—Ed.

SHEEP AND GOATS IN TIDEWATER, VA.

I would like to raise some sheep, but I am told that they do not thrive in this low-lying country, so as to be profitable. If such is the case, what do you think of Angora goats for this section? Could they be made profitable on a farm, most all of which is under cultivation, there being no bushes to speak of for them to browse, except on a branch in low-lying land of about four acres? Would they be a paying kind of stock fed mostly on the tame grasses, pea hay, corn fodder, etc.?

Would alsike clover do well in this locality, or better than the common Red clover. How about Japan clover? Would that make a good growth for grazing purposes?
A. A. MASTERS.
Norfolk Co., Va.

None of the different breeds of sheep we have in this country are well adapted for low-lying level countries like your section. In the old country there are breeds that have been specially bred for such lands, and farmers here ought to do what farmers and breeders have done there, specialize on the breeding of stock of all kinds for different localities. Probably the Shropshires would do best in your section, but the ewes should not be kept for over two years, say take two crops of lambs out of them, the lambs to be sold as early as possible each year on the Northern Markets, and the ewes be fattened as soon as the second crop of lambs has gone off and go to the butchers, and fresh ewes be bought in the early fall from the west of the State. If kept over two years the loss from parasites would probably be heavy. Managed in the way suggested, and having the lambs come in January, and February sheep should be profitable with you. Angora goats would not be likely to succeed well, as they are essentially browsing animals.

Alsike clover will grow well in your section. It does not run out as soon as red clover. Japan clover, whilst valuable as an improver for waste lands, and making grazing where no other clover or legume will succeed, is not a sufficiently heavy yielder of feed to grow on good land to be worth seeding. At the best in this State it only makes grazing, whilst on your lands you can make heavy crops of clover and other hay. Try alfalfa. It is doing well in Eastern Virginia, where the land has been properly prepared for it, and when once established will stand for many years, and give heavy crops of hay.—Ed.

ALFALFA.

I planted a piece of land this spring in alfalfa, which came up and shows prospects for a good stand. This land was inoculated last fall with bacteria, and is, I think, sufficiently rich, as it has been planted in black peas for the two preceding years. Now, I notice that the plants are turning yellow and losing their leaves. Will you kindly inform me of the cause and remedy

R. S. HUDGINS.

Evidently the bacteria has not yet sufficiently inoculated the land. Did you lime the soil before inoculating it? If the land is at all acid the bacteria will not spread in it.

If you would get some soil from a field growing alfalfa and spread on the crop it would probably correct the trouble that is, assuming the land is not acid. You should have given the land a dressing of 400 or 500 pounds of bone meal before seeding the alfalfa. The peas would only supply nitrogen to the soil, and all the legumes want plenty of phosphoric acid and potash as well. You have probably enough potash in the soil if rendered available by liming. See articles in this issue on alfalfa.—Ed.

CATERPILLARS—PEAR BLIGHT.

My cherry and apple trees are badly infested with what appear to be small caterpillars. What is best way to exterminate them; also please advise me what to do for pear blight.
H. D. LINDSAY.

Surry Co., N. C.

Burn up the webs or nests in which the caterpillars gather at night with a kerosene torch, when the worm are in them. There is no cure for pear blight. The best that can be done is to cut out all blighted wood below the point to which the blight has extended and burn it. The blight may be much curtailed by not encouraging too rapid growth of new wood. Pear orchards should not be fertilized with nitrogenous fertilizers or by growing peas or clover in them, and they should not be cultivated after June. Use acid phosphate and potash as a fertilizer. This will induce short, well ripened wood, which the blight does not attack so freely as sappy growths. All the best varieties of pears blight badly in the South. The Kieffer and Seckel withstand it longest.—Ed.

SHINNY PEA.

Will you kindly advise me, through the columns of the SOUTHERN PLANTER, the name the different seed houses give to the "Shinny Pea"?
W. H. C., JR.
Middlesex Co., Va.

The "Shinny Pea" is one of the numerous varieties of the cow pea, of which there are scores, known locally by all sorts of names. If the pea is a yellow one it is probably the Clay pea. If a mottled color it is probably the Whip-poorwill.—Ed.

FERTILIZER FOR WHEAT.

I am now plowing Yadkin river bottoms that have been thrown out for some time. I am plowing this land about six inches, and harrowing it with a 20-inch disk harrow and drilling one bushel of Clay peas and one hundred pounds of fertilizer per acre. I want to cut up these pea vines in September with my disk harrow and sow in wheat. What kind and how much fertilizer to use on my wheat?
J. H. JOHNSON.

Use 200 pounds of bone meal and 200 pounds of acid phosphate per acre when seeding the wheat. This with the pea vines should give you a good crop of wheat.—Ed.

CRIMSON CLOVER.

I have an acre of crimson clover which I have used during the spring as hog pasture. Since I took the hogs off it has bloomed profusely, but too close to the ground for profitable hay cutting. If I leave it as it is, will it not reseed itself? Or would it be better to plow it under. The ground is well covered, so that the young plants would have abundant much.

EDMUND R. TAYLOR.

Yes, if not cut the clover will reseed itself. It will do this also if turned under after the seed is ripe, but the sod should not in this case be turned flat, but be set at an angle and then harrowed, and thus shake out the seed from the projecting heads.—Ed.

Miscellaneous.

THE SOUTHERN PLANTER IN NEW ZEALAND.

On our mailing list we have now the names of farmers in nearly every country in the world. Amongst these we have subscribers in far away New Zealand one of the most prosperous colonies in the British Empire. One of these gentlemen has recently sent us a copy of his local newspaper and draws our attention to two items of news therein. One of these refers to the grain crops, from which we take the following:

"Threshing is now (April, 1905,) in full swing in all the Northern districts, and some remarkably good returns are reported. Yields of from 50 to 60 bushels of wheat to the acre have been frequently met with, while yields of over 70 bushels of oats are by no means rare. So far as I have yet seen, the record yield of wheat for the season has been obtained by a North Otago farmer, who obtained an average of 85 bushels to the acre from a paddock. Another large yield recorded from North Otago is that secured by the New Zealand and Australian Company upon the famous Totara Estate. A portion of a great area under wheat gave an average of 77 bushels per acre, while the return from the whole block gave an average of 55 bushels, which is remarkable in view of the fact that the crop was blighted and thought to be seriously affected in the matter of yield. Amongst other remarkably good wheat yields may be mentioned one of a little over 70 bushels to the acre, threshed out by Mr. John Buckley, near Oamaru. In oats the century has been exceeded in several instances, the top return being 120 bushels, obtained in South Canterbury by Mr. Joseph Harris, and in North Otago by Mr. Stewart Holmes. From North Otago there also comes the report of 117 bushels having been threshed by Mr. Geo. Hutcheson, on the Tokorahi settlement, while over 100 bushels was scored in South Canterbury by Mr. F. M. Young."

We would like to be able to report yields like these from some of our Virginia farms.

The other marked item refers to a sale of sheep for which stock the colony is famous shipping both wool and mutton to the English markets regularly although over 15,000 miles away. The value of wool shipped in 1901 was over \$18,000,000 and of frozen meat over \$11,000,000, and of butter and cheese over \$5,000,000. The item as to the sheep sale is as follows:

"An important sale of sheep from Burwood Station was held yesterday on behalf of R. Campbell and Sons, whose leases have just expired. Three hundred buyers were present, including a strong Canterbury contingent, and bidding was very keen, 27,000

sheep being disposed of in 32 minutes for a sum approaching £30,000 (\$150,000)."

Our correspondent pays the *SOUTHERN PLANTER* a high compliment declaring that he has derived a lot of useful knowledge from its pages and that it ought to have a very much larger circulation.

EXPERIENCE OF A NEW SETTLER IN VIRGINIA.

Editor Southern Planter:

I would like to advert to my article in the May issue of the *SOUTHERN PLANTER* "Experience of a New Settler in Virginia," as a possible misapprehension may exist in reference to the community and real estate agents. It was not my intention to under estimate or depreciate the worth and integrity of such of our neighbors as showed us real and true friendliness. I feel secure in the knowledge that these believe in our sincerity and sense of appreciation at the assistance rendered.

Furthermore, I understand that some real estate men (evidently of the kind referred to) are taking a mean advantage in so construing my meaning as to disparage the gentleman with whom we did business. I am happy to say that we bought from a thorough gentleman and that our regard for him before the purchase has not suffered any check since that time. We entertain the highest regard for his honesty and fair dealing, and are well satisfied with our purchase. Our eyes were open when we bought and as long as we did not expect to pick gold dollars from every shrub we are not disappointed. Our ideas as to the abuse of the land and the needs thereof are being borne out conclusively so far. As an instance of this, last year we broke deeply two plots of poor upland, part on one side of county road and part on the other. The nature of each piece of ground was identical. The first plot was planted in corn and owing to the season had the advantage of the other by a good deal. On the second plot we applied all the manure we had made up to that time and planted corn latter part of June. Both received the same attention. I wish some of the skeptical could have seen that corn on this manured land outgrow and out-yield that on the first plot. At last working of corn we sowed Crimson clover. On the first plot there was none, but anyone who could have seen the growth of Crimson clover on the second plot last May as far as manured would hardly have any reason to ask, "Can you raise anything at all on the so-called worn out soils of Virginia?" as I have been so often asked.

There isn't a doubt in my mind that with proper treatment the poor (?) soils of Virginia can be made to produce as much per acre as the best soil the West

ever had. Follow statistics and even now with the one crop method in vogue throughout the State and Virginia stands in the front rank on averages.

I believe in the future of the South and that of Virginia especially. I believe what I have heard many others say, that the South will yet in years to come be the greatest and richest agricultural section of this broad land of ours. Natural conditions favor this but all land owners have a part to play and it behooves every able-bodied man to be up and doing.

Let every man in Virginia contribute his share toward the success and prosperity of agricultural conditions in his locality by starting now as far as his means permit to improve his farm and give back to the soil a tithe of that which has been taken year after year. Clean up the washed places and cut down those portions growing up to old-field pine and brush and make use of the various leguminous crops at the service of all Southern farmers and beautify and enrich the farms and stop growing weeds and broom sedge. If you have more land than you can take care of sell half of it and make the remaining half worth twice the whole. What is the use of paying taxes on land that returns you nothing? Put a little determination to the front and apply a little personal energy with the one idea of intensive farming under the guidance of such well qualified men as I referred to (Profs. Soule, Massey, editor SOUTHERN PLANTER, etc.), and we may all have pleasure and profit as the result.

What are the people of the West doing to-day and have been doing in the past? They are spending money freely, irrigating arid sections to make them productive and then owing to seepage tendencies from irrigation they spend money again tile draining their farms to carry off the surplus subsoil water. Is it a wonder that land should be worth from \$60 to \$100 an acre? They make it worth something!

Where do soils respond quicker to improvement and with less cost than in the South? Does it not argue an inherent fertility that has simply been abused by careless methods of farming? Make the land worth something and it won't sell for \$5 to \$10 an acre; nor will it appear as if the whole State of Virginia was for sale as it now appears to the unsophisticated looking at land catalogues.

Live stock and its concomitants are much needed in the South but application, earnestness, and energy are far more needed if one can judge by observation and appearances.

H. B. Bush.

Powhatan Co., Va.

TIDEWATER VIRGINIA.

Editor Southern Planter:

One-third the month of June has gone, and the month so far has been dry, more so than usual. This gives the farmers a good chance to free the corn crop

from grass and weeds, and a dry June almost always means a good corn year.

Figures compiled by the Norfolk Chamber of Commerce show that there is \$2,000,000 invested in the Norfolk section in the oyster business; and 3,500,000 bushels of oysters are taken annually from the waters here; giving employment to 4,000 hands. The fishing business is surely equally as large; while the clams and crabs come in to round up a great big industry, with salt water as the basis.

To these facts, figures and features, add the peanut business, the coal business, and the lumber business, and one will readily see that this is quite a busy bustling business centre down in this Southeastern corner of the Old Dominion.

We quote from the Chamber of Commerce figures or reports as follows—viz., potatoes shipped during past year \$1,500,000; cabbage, \$400,000; spinach and kale, \$500,000; berries, \$900,000, and all other truck crops \$3,000,000, making \$6,000,000 worth of farm products shipped from this port in a single year, most of it grown within less than 20 miles of this seaport.

Now, there are a few of our people who would like to keep such facts, figures and features from the world at large. They really and honestly, we suppose, think it is not best to let the world know anything about the prosperity of this section. They are afraid that if it be known that money is being made here there will be too many coming this way to overdo matters. They think that the taxes will be raised on them if the assessors think that the land owners are doing well.

Therefore they don't think it best to record the successes here but they are quite quick to mention the failures. We don't think it best for any man or set of men to try to keep their light under a bushel.

There are plenty of people, however, who if they saw a hole leading to prosperity would hasten in and haul the hole in after them, to keep others from doing likewise. There is altogether too much selfishness in this world. There are many, alas too many, who would wrap their cloak selfishly around them and let everybody else freeze.

There are others who will extend their cloak and help others in out of the cold, and in so doing warm themselves at the same time. So we believe in telling the good even if it does, to a certain extent, shut the mouth or drown the voice of the croaker.

Writing about the corn crop calls to mind the fact that away back in 1607 in the month of April when the first English fleet touched our shores, a little party landed where the city of Hampton now stands, and the Indians made them a feast, giving them fish, oysters and corn cakes. So the Indians were raising corn here at that early period, and that is why we call it "Indian corn" to this day.

This is the natural corn belt of the United States. Here it fully matures and the grain is heavier than at the East or West in more northerly latitudes.

The yield in bushels is not so large as at many other places it is true, but take the richest land in the West and "truck it," "tater it," and "tobacco it" for a couple of hundred or more years and see if the yield will keep up as well even as it does down near the sea in Old Virginia.

But our lands are quick kind and responsive to good treatment. Take the worn lands and there are two good farms underneath, untouched by the plow. It is not necessary to turn up these two farms; but we can send down the subsoil plow to loosen them up and leave them as they are—underneath. Then we can send down the clover, and the cow pea roots to absorb the strength of the subsoil, and bring up to the surface rich stores of plant food. We can apply cow manure to the surface, and make judicious application of a little real good commercial fertilizer and in a short time make these worn lands produce four-fold as much as they produce now, and we can do it in the same time, and with the same motion and the same expense as is necessary to grow the smaller crops.

We are getting here and there progressive men who are improving their lands, and we don't want such to keep their light hid, but let it shine so that others may go and do likewise until the soil here is all brought back to its original state of fertility.

If a man is guilty of growing more corn than his neighbors, he should be made to tell how he does it, so that others may do it too.

A. JEFFERS.

Norfolk, Va.

THE VIRGINIA STATE FARMERS' INSTITUTE.

Editor Southern Planter:

Farmers' institutes are not a new institution in Virginia. They have been well and favorably known for a number of years past, though in the last year or two they have probably made more progress than at any period since their inception. While considerable progress has been made in organizing county institutes in the various parts of the State, no effort was made to organize a central State institute until last year when a meeting was called in the city of Roanoke about the first of September by some live and progressive farmers. The meeting was well attended, all things considered, and a permanent organization was effected and the following officers elected to take charge of the work for another year:

Ex-Governor J. Hoge Tyler, President, East Radford.

T. O. Sandy, First vice-President, Burkeville.

John T. Cowan, Second Vice-President, Cowan's Mills.

Andrew M. Soule, Dean of the College of Agriculture and Director of the Experiment Station, Secretary, Blacksburg.

J. M. Williams, Industrial Dept. N. & W. R. R., Asst. Secretary, Roanoke.

The Executive Committee met some time ago and decided to hold the second annual meeting in the city of Roanoke on July 12, 13 and 14. The officials of the Norfolk & Western R. R. were approached and gladly consented to make a single fare rate for the Institute on account of the great advantages it would offer to the farming community. Negotiations are in progress at the present time for similar concessions from the other railroads and it is confidently believed that they will in turn make an equally favorable rate. The dates selected were chosen because it was believed the farmers would have about as much leisure at that time of the year as at any other season, and as one of the features of the Institute is to be a trip to Blacksburg to visit the College of Agriculture and Experiment Station, it was advisable that a season of the year be selected when the growing crops could be examined. Arrangements have been made for a special train to visit Blacksburg on the last day of the Institute so that all delegates may have a chance to examine the work in progress there free of cost. Such an opportunity has never been offered to Virginia farmers before, and it is believed that hundreds of them will avail themselves of the chance to examine the five hundred varieties of grasses, cereals and legumes growing on the experimental plats which now comprise more than 300 acres of ground. A special announcement regarding the excursion will be made at a later date, hence nothing further with reference to it will be said at this time.

The program is now in the course of preparation and already the services of several distinguished men have been secured to take part in the discussions. Some of these gentlemen come from outside the State but owing to their long and active connection with institute work and their well known success as farmers, their names are not unfamiliar to us. Among the number secured are Hon. T. B. Terry, of Hudson, O., who will discuss the subject of Soil Rejuvenation and Management. Mr. Terry is eminently qualified to speak on this subject for he started with an extremely poor farm and has achieved wonders with it; so much so that his name is known far and wide as one of the most practical and successful speakers now on the institute platform.

Those who know of Mr. Jos. E. Wing, of Mechanicsburg, O., will be glad to hear that his services have been secured to address the Institute on the sub-

ject of Alfalfa. Alfalfa is undoubtedly attracting more attention than any other crop grown in the State at the present time. Mr. Wing has done more than any one else*to demonstrate the feasibility of cultivating alfalfa on the clay lands of the East, having brought it to Ohio from the West many years ago. Mr. Wing is a particularly interesting and instructive speaker and it will be a treat to hear him.

Prof. John H. Hamilton, Institute Specialist of the U. S. Department of Agriculture, has also prom-

free of cost for the asking, either through the published bulletins or by letters addressed to the individual members of the staff.

The horticultural interests of the State will not be overlooked on the program and due attention will be given to our insect and fungous pests. The question of Sheep Husbandry will be discussed by J. F. Jackson, editor of the SOUTHERN PLANTER, Richmond, and the trucking interests by a number of very well known farmers. The program will thus be the best



ised to be present and his addresses are always interesting and to the point.

Besides the above it is expected that many of the leading farmers of Virginia who have specialized in the production of corn, tobacco, cattle, apple growing, etc., will be present and deliver addresses. Several of the more important subjects being investigated at the Experiment Station will be presented for the consideration of the delegates. Among these may be mentioned the results of feeding trials with beef and dairy cattle and the general educational work of the College and Station. It is safe to say that not one farmer in a hundred understands or appreciates the value of the information which the Station is accumulating from day to day for his benefit and which is

that can be provided as neither labor nor expense will be spared to make it both educational and practical in the strictest interpretation of these words. The delegates can thus rest assured that in coming to the Institute they will obtain information from experts who have made a practical success of the subjects they will be called on to discuss.

Finally, those who attend the Institute are urged to come prepared to enter into a discussion of the various subjects on the program, as it is in this way that the greatest benefit will be derived, and every man, no matter how humble his station, will be treated cordially and his opinions welcomed, provided he will confine himself strictly to a discussion of the subject in hand.

It is hardly necessary to say that there is a bright future before Virginia farmers; that the greatest need at the present time is organization and a better knowledge of the scientific facts related to farming. There is a better way to do things than is often followed to-day, and it is the pursuit of the better way that alone insures success. There is room for specialization in a hundred different ways by the farmers of the State, and it is the purpose and object of this meeting to try and inspire our farmers and to lead them onward and upward to better things. The meeting is utterly devoid of any religious or political bias and is strictly what its name indicates—a Farmers' Institute or School. So far as the writer knows there is no person connected with it who has an axe to grind or any ambitions to satiate through it. It is a purely missionary effort for the purpose of disseminating useful facts and information relating to agriculture. It is but the outgrowth of similar organizations in other States where a work of wonderful value has been accomplished through just such gatherings. By it and through it the farmers of Virginia will have an opportunity to meet with each other and discuss subjects which are of momentous concern to them. If the Institute were organized solely with the idea of promoting the social feature of farm life, it would well repay hundreds of farmers for attending it. The mere mingling with one's fellowmen, gaining new ideas and gathering inspiration is of itself wholesome and one of the best ways of insuring progress. But the social feature, as the program indicates, will constitute but one phase of this important gathering as much useful information will be disseminated throughout the entire three days of the meeting as the exceptionally strong program now in course of preparation testifies. Can the farmers afford to go? How can they afford to stay away in view of the liberal rates made by the railroads and the excellent program which has been prepared? It has paid farmers in other States to make any sort of sacrifice to attend these meetings, it will pay our farmers just as well.

The writer had the honor to be the Secretary of the East Tennessee Farmers' Convention and Farmers' Institute for five years. This organization met in Knoxville, Tenn., and over 3,000 tickets were sold to the last annual meeting. Five years ago there were comparatively few silos in East Tennessee; little attention was given to the feeding of live stock, and less attention to the breeding and improvement of the same. The grass question had not been agitated; the corn crop was being deeply plowed and the

roots broken and destroyed, though they are the means by which the plant is fed. Many useful crops, such as alfalfa, soy beans, etc., were practically unknown. Did the Convention do these farmers any good? Not long ago it was the writer's privilege to visit a live stock sale in Bristol where some 43 head of Shorthorn cattle were sold at an average of \$100. Nearly all of these animals, though bred in Virginia went to upper East Tennessee, showing how thoroughly the people have come to appreciate the merits of improved stock. Then, they are building many silos; they are striving to get grass where for years the sole ambition has been to grow corn. They are endeavoring to build up and reclaim the land through the use of leguminous crops. They have come to appreciate the difference between good and bad varieties of corn and wheat and the necessity of improving the same through selection. The writer knows that a good part of this uplifting of the agricultural classes was due to the effects of their gathering together in annual Convention and discussing the hundred and one important problems with which the farmer has to deal. They were benefited and interested by their annual tour of inspection of the Station farm. They learned to know and to appreciate the value of education, and hence sent many of their sons to the College of Agriculture that they might learn of the new gospel of agriculture and go out and become missionaries in the various communities in which they reside, and so it will be with a convention in Virginia organized and fostered along similar lines.

As already stated, no effort will be spared by the officers of the Institute to provide an interesting and instructive program; one that will bring within the reach of hundreds of our farmers information of a practical nature which they can take home with them and apply to advantage in their business. The officers of the Convention will endeavor to do their part. Will the farmers of Virginia avail themselves of this splendid opportunity? Will they attend the Institute and come within reach of its inspiring influences, or will they stay away believing that they know all there is to know about agriculture and that they can not afford to take the time away from their business or spend the small amount of money necessary to go to Roanoke? We believe that they will go and that the coming Institute will be more largely attended than any other similar gathering in the South. Every one will be welcome. No delegates can be appointed this year owing to the fact that Congressional Vice-Presidents were not elected at the last meeting, but if each farmer will consider himself a

committee of one to interest his friends and neighbors in the gathering, success beyond the fondest hopes of the officers of the Institute will be assured.

ANDREW M. SOULE,
Secretary.

Blacksburg, Va.

CREAM SEPARATORS.

Editor Southern Planter:

I noticed an article in your January number from Mr. R. H. Price in regard to hand cream separators, and making some inquiries about the same. Now, Mr. Editor, perhaps Prof. Soule would not be a competent judge in the matter, he may not have had a chance to handle all the various kinds of separators now on the market, there are so many different makes. I am a South Dakota man and lived for years in the best dairying section of the State, with creameries all around me, and nearly every farmer owning a separator, and of course all kinds of separators were represented. South Dakota, and Minnesota have taken about every first-class prize for gilt edge butter, in all butter contest, and their butter always sells on New York and Boston markets as extras. I was agent for years for the "Davis Cream Separators," made in Chicago and of course as agent was in competition trials with nearly all kinds of separators, and always came out with flying colours. I have made the "Davis" skim down to .075 of one per cent. the closest skimming of any machine I ever heard of, and I think that if Mr. Price would write to the Davis people they could give him some information that would be of benefit to him. Their machines are, in my opinion, the best and finest built machines now on the market, with the least number of parts to clean of any machine that I know of. I have no axe to grind, but am simply giving my honest opinion on the matter. I may later write an article on our method of making gilt edge butter in South Dakota if it is wished.

WM. H. DENTON.

Dinwiddie county.

Let us hear from you on butter making.—Ed.

RESULT OF SPRAYING IRISH POTATOES.

Potatoes are now in the ground; and many farmers think that practically all has been done that it is possible for them to do in the way of improving their chances for a good crop. Of course, all will cultivate a few times and most will pick or poison bugs. How many intend to spray for diseases? The experiments made by the Station at Geneva during the past three years prove that spraying with bordeaux mixture for the prevention of blight and rot is a most important factor in increasing the yields.

In 14 co-operative tests, made by farmers using farm methods, there was an average gain of 62½ bushels per acre on 180 acres, with a net financial gain of \$24.86 per acre.

In 41 volunteer experiments, reported to the Station but in no way controlled or directed by it, more than 360 acres were sprayed, with an increased yield averaging 58½ bushels per acre and with a profit of \$22 per acre.

Thirty growers cleared \$10,000 by spraying.

These figures certainly should command the attention of potato growers, and the bulletin containing them, No. 264, should be secured and read with care. A card with your address sent to the Station will secure this, or any current bulletin.—*New York Experiment Station.*

ORPINGTON FOWLS.

The editor of the Orpington Poultry Journal who was the originator of the breed says:

Do not imagine that you can tell your future winners at three days old. Do not criticise the color of your newly hatched chicks, because it is impossible to tell anything about them, as a black fowl hatches out black and white; a buff fowl often quite creamy, so much so that it is impossible to tell them from a white chick. Then the buffs often come with two or three dark stripes down their backs. A chick has to be at least four months old to be able to tell what its color is going to be.

DAIRY FARMING.

1. I want to know can I make 15 or 20 cows pay where I am too far from market to sell milk, by making butter, and what is the best cow to get? What the best breed to use?

2. What is the best thing to plant for a permanent pasture?

3. Do you think I can raise alfalfa, and where can I get the seed? F. M. PRIDGEN.

Onslow Co., N. C.

If you keep the right cows you can make them pay anywhere in the South by producing a fine article of butter or by selling the cream. We know men who ship cream 400 or 500 miles profitably, and for fine butter there is a market in every town in the South. Nearly all the fine butter sold in the South comes from New York State, or from the West. You want to keep Jersey cows for the butter trade, and either Jerseys or Holsteins for the cream trade. You will require to have a good dairy equipment—separator, churn and butter worker, and have a plentiful supply of ice and pure, cold water, and thus be able always to guarantee the finest article and a regular supply of a fixed quantity.

2. In the South Bermuda grass makes the best permanent pasture. Bermuda grass and Burr clover seeded together make nearly an all the year round pasture, but should be helped out by crimson clover and vetches in the early spring. Silage should be your main reliance for winter feed, helped out with cow pea hay and other forage crops.

3. Yes, you can grow alfalfa if you prepare the land properly. See articles in this and other issues. You can get the seed from the seedsmen advertising in the *PLANTER*—Ed.

THE
Southern Planter

PUBLISHED BY
THE SOUTHERN PLANTER PUBLISHING CO'Y.

RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.
B. MORGAN SHEPHERD,
Business Manager.

TERMS FOR ADVERTISING.
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 60c. per annum; all foreign countries and the city of Richmond, 75c.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

NO ANONYMOUS communications or enquiries will receive attention.

SUBSCRIBERS failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

Address **THE SOUTHERN PLANTER,**
RICHMOND, VA.

Entered at the Post-office, Richmond, Va., as second-class matter.

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PUBLISHER'S NOTES.

To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month.

WITH THE ADVERTISERS.

Dairymen will find the Warriner Patent Chain Hanging Cattle stanchion a most useful device. Look up the ad. and send for pamphlet.

In addition to selling pure bred Angora goats, the Diamond V Ranch, Rock Castle, Va., also offers Mexican burros at very reasonable prices.

The Manlove Self-Opening Gate not only adds tone to the appearance of your place, but saves you the trouble of getting out of your vehicle to open and shut gates.

Agents are wanted for the Sampson Everlasting Cement Fence Posts advertised by Mackay & Co., Chicago. Look up the ad.

Some fine Angus cattle and Shropshire bucks are offered by Rev. S. S. Hepburn.

Suffolk sheep are advertised in this issue by Mr. K. E. Harman. Look up his ad. and write to him for prices and information.

The Ewell Farm is offering infected soil to farmers who contemplate sowing alfalfa this fall.

Mr. John F. Tucker is offering some nice Berkshires.

Great things are claimed for the Jersey Lily Potato advertised by Jas. Vibert.

Mr. R. B. Minor is local agent for the well known Royal Poultry Remedies. Look up his ad.

Mr. C. S. Townley is a newcomer among Berkshire breeders advertising in our columns. He is going right after the trade with good stock at low prices.

The Stratton & Bragg Co. start the season's advertising with half page ad. in this issue. You will do well to get this firm's catalogue of implements, engines, etc.

Some of our Western subscribers are advertising for farms for lease and sale.

Hampshire Down sheep can be had of Mr. J. D. Thomas. Look up his ad. Any one who is in the market for

WOOD'S
Seed Potatoes

IN COLD STORAGE

For Late Planting.

Planted in June and July, these yield large crops of fine potatoes ready for digging just before cold weather comes on, carrying through the winter in first-class condition for either home use or market. By our methods of carrying these Late Seed Potatoes in cold storage, we are enabled to supply them unsprouted and in first-class, sound condition, just when they are required for late planting.

Book your orders early so as to get the kinds you want, but don't order shipment until you are ready to plant, as the potatoes commence to sprout very soon after being taken out of cold storage. Prices quoted on request.

We are headquarters for **Cow Peas, Soja Beans, Millet Seed, Sorghums, etc.** Seasonable Price-list telling all about Seeds for Summer planting, mailed on request.

T. W. Wood & Sons, Seedsmen,
RICHMOND, - VIRGINIA.

AGENTS FIRE SAMPLE SENT ANYWHERE ON RECEIPT OF

\$1.50



QUICK GAS FIRE FROM KEROSENE OIL



Our Oil-Gas Fuel Burner converts your Coal Range or Wood Cook Stove into a Gas Range without any alterations; works perfectly in any place. Guaranteed Absolutely Safe and not to get out of order in five years. Burns on kerosene or oil; heats your room efficiently; forbidding gas-leaking, perfectly safe. **PRICE \$3.00.** (Excludes the cost of hose, pipe and fittings. See Agents' circular.)

OIL-GAS F. B. Co., Dept. 8, Baltimore, Md.

Fontaine Shock Binder.

A strong windlass weighing only three pounds. Prevents corn shocks from falling or being blown down. Prevents shocks getting wet inside when it rains. Saves labor of two men. A great help in stacking wheat, oats, etc. Best endorsed farming implement in the United States. Sent, express prepaid, for \$1.75. Write for circular. Agents wanted. **THE FONTAINE CO., Christie, Va.**

BANK OF RICHMOND,

Main and Tenth Streets.

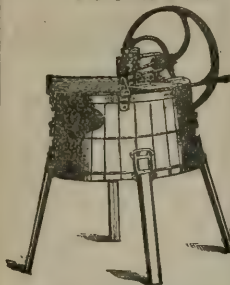
CAPITAL AND PROFITS, - - - \$1,134,938.14.

Special attention paid to out-of-town accounts. Correspondence invited.

Three per cent. interest allowed in Savings Department,

Compounded semi-annually.

YOU NEED

A
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THE BEST WASHING MACHINE ON EARTH.

Made on scientific principles, it saves TIME as well as CLOTHES.

Made by the largest woodenware manufacturers in the world, who can afford to make the best Washers, CHEAPER THAN OTHERS.

Send for illustrated catalogue, it will please you.

Send for the machine itself, it will satisfy you.

—MADE AND GUARANTEED BY—

The Richmond Cedar Works.
Richmond, Va.

a peanut or grain thresher should look up the ad. of Geo. C. Burgess.

Splendid Shorthorn bull is offered for sale by Wm. E. Peery. He wishes to avoid inbreeding.

A splendid offering of Red Polls is made in this issue by M. B. Rowe & Co.

The Spangler Mfg. Co. is offering its Low Down Drill to our readers again this season.

One of the most attractive ads. in this issue is that of the Continental Plant Co. The attractiveness lies not only in appearance, but in the offering.

Elizabeth College and Conservatory of Music, of Charlotte, N. C., makes its usual announcement in this issue. Any of our readers who contemplate giving their daughters a musical or college education should write for the catalogue of this college.

Smithfield Business College has an announcement on another page, to which we invite attention.

The N. & W. Railroad is doing a good work on behalf of immigration in this State. Persons contemplating settling here should get in correspondence with Mr. F. H. La Baume, Immigration Agent.

CATALOGUE OF V. P. I. FOR 1904-5.

Catalogue just issued shows 66 teachers and 728 students. Students classified as follows:

Graduate students	23
Seniors	103
Juniors	124
Sophomores	191
Freshmen	247
Special students	40

728

The name of a Senior was inadvertently omitted from catalogue. The total enrollment is, therefore, 729, with 104 Seniors.

Twenty-three States and Territories and seven foreign countries are represented in the student body. 628 students, including the omitted Senior, are from Virginia.

A new schedule, allowing greater elasticity and favoring election of studies replaces the former somewhat narrow and rigid scheme of lectures. Hereafter the session will be divided into three terms: The first beginning September 21st and ending December 20th; the second beginning January 2d and ending March 20th; the third beginning March 21st and ending with Commencement Day.

At the approaching commencement about 100 degrees, graduate and baccalaureate, will probably be conferred.

"NO BETTER MADE."

"The writer, who is a practical farmer and poultryman, knows the value of Page Fences, and can say that there are no better made."—Editor Inland Poultry Journal.

Mention **THE SOUTHERN PLANTER** in writing.



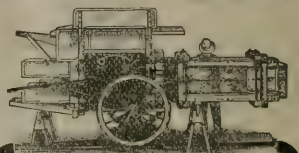
A low wagon at low price. Handy for the farmer. Will carry a load a day, where a horse can travel.

Low Down Wagons

soon earn their cost on any farm.

Steel Wheels

for farm wagons. Straight or staggered spokes. Any size wanted, any width of tire. Hubs to fit any axle. For catalogue and prices, write to Empire Mfg. Co., Box 140 H Quincy, Ill.



BALED HAY

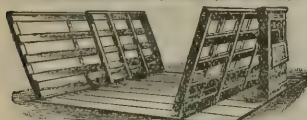
can be sent to the right market at the right time. There's money in it if your bales are right.

DEREDICK'S CONTINUOUS BELT PRESS is unrivaled. It produces the best packed and best looking bale on the market. Other presses, large and small, for baling all sorts of products. Send for illustrated catalogue, free. P. K. Dederick's Sons, 26 Tivoli St. Albany, N.Y.

in The New Idea Pitless Scale

You have \$\$\$ coming. You save them on "undersight" when you buy an Osgood "New Idea" Steel Pitless "Ready to Weigh" Scale. No pit. No wall. No timber, no concrete platform planks. No expense or trouble.

You know you need a scale. You have been thinking and talking about it for years. Now send for our prices and liberal terms. Don't wait until you have lost the profits on another year's crops. We make all



kinds of scales. By the way, do you know a good machinery man? Do him and us a favor. Show him this ad. and write us about scales for yourself.

Osgood Scale Co., Box 190, Binghamton, N.Y.

WARNER'S CHAIN HANGING STANCHION

CLEAN, SAFE, DURABLE AND COMFORTABLE.

WALLACE B. CRUMB, FORTS VILLE, CONN.

BALE YOUR OWN HAY.

MILLET SORGHUM PEAVINES ETC.

WITH A "HANDY" BALER

THE STRONGEST, MOST POWERFUL, SWIFTEST AND LIGHTEST OPERATING HAND PRESS EVER PUT ON THE MARKET.

MAKES ABSOLUTELY UNIFORM BALES STANDARD SIZE EITHER HIGHT OR LENGTH.

LITTLE GIANT HAY PRESS CO.

KALLES, TEXAS

WRITE FOR PRICELIST, CATALOG, HAND-OPERATED POWER PRESS, FREE.

WHITMAN BALING PRESS

for sale, price, \$250. This is a splendid press, as its make indicates. Horse or steam power; size of bale 14x18, usual length. A bargain at above price. Address Box 555, Richmond, Va.

Well Drills

For Horse, Steam or Gasoline Power

Well Augers

For Horse Power

Address

LOOMIS MACHINE CO.

TIFFIN, OHIO



FOR SAMPLES AND CIRCULARS ADDRESS
F. H. JACKSON & CO.
Agents Wanted. Winchester, Ky.

Clark's Tools for Large Hay Crops

Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the sub-soil water. It is an excellent machine for covering in sugar cane. Strength guaranteed. Can plow a newly cut forest, stump, bush, or bag land, leaves land true, clean for any crop.

Clark's Double Action Cutaway Harrow moves 15,000 tons of earth in a day.

Send for Circulars.

Clark's Rev. Sulky Disc Plow

Made single or double. One or two furrows five to ten inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar plow made. When Clark's grass tools are used side-ditched in his grass circuit, we, the G. H. Co., guarantee them to kill wild mustard, charlock, hardhead, sunflower, milk weed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seedling to grass.

THE CUTAWAY HARROW CO.,
Higginnum, Ct., U. S. A



HEEBNER'S ENSILAGE CUTTER.

The best cutter on the market for green or dry crops. Leading ensilage cutter made. It not only cuts but crushes the stalks, rendering them palatable. Stock greatly relish as it is in it. A 40-horsepower turns the machine into a perfect shredder. Runs with least power. Can feed out all kinds of stock feed. Heavy manure pump, plowing, churning, grinding, etc. Catalogue free.

HEEBNER & SONS, 25 Broad St., Lansdale, Pa.

SPANGLER DRILL
Low down
GRAIN AND
FERTILIZER
SUPERIOR TO ALL
OTHER DRILLS.
Even distribution
of lumpy,
dumpy or dry
fertilizers. In-
creases crop
profits. High
wheels, broad
tires, low steel
frame. Fully
warranted.
Write for free
catalogue.

SPANGLER MFG. CO., 804 Queen Street, York, Pa.

MCCORMICK

CORN BINDER

for sale. Splendid machine at a bargain. M. H. ONLEY, Modestown, Va.

Water Problem Solved

Machine for domestic well making. Cheap-est by half. Most practical of any. Catalogue free. KOGER & SONS, Mooresburg, Tenn.

WE'LL PAY THE FREIGHT

and send 4 Heavy Wheels, Steel Tire on, \$7.25
With Rubber Tires, \$12.00. 4 mfg. wheels, \$4.42
Road, Top Springs, \$28.15. Harness, \$3.60. Write for
catalog. Learn how to buy direct. Repair Wheels \$4.50.
Wagon Umbrella FREE. V. E. BOBBS, Cincinnati, O.

SUMMER SALE AT BILTMORE.

Biltmore Farms announce, on another page, their first summer sale of high class Jerseys and Berkshires. This is a particularly interesting offering for many reasons. It is the first time that the farms have been in a position to sell any of their best heifers, but with over 150 on hand and a new farm already stocked this year with surplus heifers, they have now at last arrived at a time when they can put on the market some of the highest class heifers that have ever been bred, and do this without weakening the future of the herd too much.

No breeding establishment in the world has used the care which these farms have in building up absolutely healthy herds; not only are they free from tuberculosis, and come from herds which this has been kept out of by careful quarantine and purchasing on tuberculin test, but in addition to this these herds are absolutely free from contagious abortion, having been built up entirely from either imported animals or else from young heifers and bulls which have not been subjected to contagion, have been developed and bred on these farms, entirely isolated from outside contagion. The breeding is, of course, the very best, by the very best bulls in the land, out of cows that are equally well bred, and are large producers in the dairy.

Speaking generally, Biltmore Jerseys have during the last ten years shown a very strong, robust type, that makes them a profitable investment, as they will do just as well when sold into good hands as at home, and in many cases have done better owing to superior pastures. This large, strong type has been refined by frequent infusions of the best Island blood, and purchasers at this sale will get the benefit of the many years of work for which these importations have been made, and will be offered the finished product. For the convenience of those living below the fever line, all purchases will be kept free of charge until after October 1st.

The Berkshires have been raised under more favorable conditions than ever. A large area has been added this year, in the way of alfalfa and clover crops; the skim milk is threefold what it was, and under the careful feeding of the herd manager, the lot now offered are of the highest type of practical, good feeding Berkshires, that will go on and improve under good treatment, and are as hard as nails, not having been unduly pushed in any way for this sale.

FINE STOCK AT ELLERSLIE.

Messrs. R. J. Hancock & Son advise us that they have at present some especially choice yearling Shorthorn bulls, also yearling Southdown rams ready for delivery.

Parties in need of some good stock are earnestly requested to correspond with the above firm.

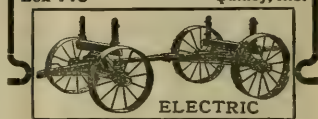
YOU Can Save a Lot of Work!
Can Save a Lot of Money!
Can Increase Your Comfort!
Can Increase Your Profit!

If you are interested in these things we will like to send you our new book about

ELECTRIC STEEL Wheels
and the
ELECTRIC Handy Wagon

More than a million and a quarter of them are in use and several hundred thousand farmers say that they are the best investment they ever made. They'll save you more money, more work, give better service and greater satisfaction than any other metal wheel made—because They're Made Better. By every test they are the best. Spokes united to the hub. If they work loose, your money back. Don't buy wheels nor wagon until you read our book. It may save you many dollars and it's free.

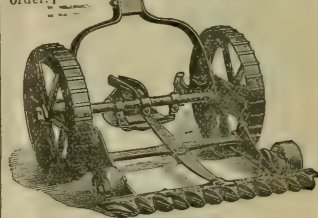
ELECTRIC WHEEL CO.,
Box 146 Quincy, Ills.



Clipper Lawn Mowers

WILL cut short grass, tall grass and weeds. If your dealers have not them, here is the price. Send draft or money order.

No. 1—12 in. \$5.00
No. 2—15 in. \$6.00
No. 3—18 in. \$7.00
No. 4—21 in. \$8.00



CLIPPER LAWN MOWER CO., Dixon, Ill.

STUMP PULLERS
SEVEN SIZES
\$1750 UP
DEPT. F. W. SMITH GRUBBER CO. LACROSSE WIS.

WE PAY THE FREIGHT
CATALOG
FREE

THE IMPROVED
SCREW STUMP PULLER.
Write for Prices.



Chamberlin M'g Co, Olean, N. Y., U. S. A.

DID IT EVER OCCUR TO YOU

that an artesian well is the absolutely sure source of pure, clear, cool water

AND

that we make a specialty of drilling them and furnishing all kinds of Pumping and Water Supply Plants, Complete? Our long experience will put money in your pocket.

TANKS, PUMPS, WIND MILLS, Wood Saw Tables, RAMS.

Sydnor Pump & Well Co.,
(INCORPORATED.)
Box 949. Richmond, Va.

Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 8 horse power, \$100; 6 H. P. double cylinder, \$200.

SOUTHERN MACHINE MANUFACTURING CO.,
731 E. Cary Street, Richmond, Va.

BOILERS - ENGINES

new and second hand, from 2 to 100 H. P. Gasoline Engines and machinery of every description at one-third actual value. D. L. CASEY MCH. CO., Springfield, Ohio.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

A BIG CHANCE FOR THE BOYS.

We understand that a prize name competition has been inaugurated by the J. Stevens Arms & Tool Company, makers of the world-famous Stevens Rifles.

The object of their competition is to get a name for a new Boys' Rifle. Every wide-awake lad the country over has a chance to win one of the prizes they offer. A "Favorite" No. 17 Rifle goes to the boy sending in the best name; a "Little Krag" No. 65 goes to the boy sending in the second best name; a "Crack Shot" No. 16 goes to the sender of the third best; a "Stevens-Maynard, Jr." No. 15 to the fourth best, and a "Tip Up" No. 41 Pistol to the fifth.

Their competition closes the 15th of August, 1905. Every boy can send in as many names as he chooses, though, of course, he can only secure one Stevens as a prize.

The conditions are very simple. Write on but one side of the paper, date the communication, state name and address plainly, and send it to the Prize Rifle Competition, 380 Main street, Chicopee Falls, Mass. If a number of boys send in the same names, the boy sending in the name first will receive the prize. The officers of the company are to be the judges.

We feel sure that such a generous offer as this will bring in thousands of replies from boys the country over.

SICKNESS AND LOSS FROM DISEASE AVERTED.

The following letter is only one of many that are received daily by Dr. Jos. Haas, the manufacturer of the famous Hog and Poultry remedy that has stood the test of almost thirty years before the public, which long standing of tests and trials is sufficient proof of its merits. Dr. Jos. Haas realizes that the hog is the biggest money maker on the farm, hence he is willing at all times to give any advice regarding the care and treatment of that animal to any swine raiser that writes him for it. He will also send free to any one making inquiry a copy of his book, "Hogology," the most complete treatise on profitable swine raising that is given free to consumers.

Mobile, Ala., June 5, 1905.

DR. JOS HAAS, Indianapolis, Ind.:

Dear Sir,—Enclosed find remittance for another shipment of your Hog remedy. I have been using the last shipment, and am perfectly delighted with it, as I have not had a sick hog since I began using it, and I am going to continue to use it regularly as a preventive. Some of my neighbors have been losing their hogs, but mine are in a healthy and thrifty condition, and I feel perfectly safe when I am feeding your remedy. Please make shipment promptly, as I will need it in a few days. Yours hastily,

J. A. DUMAS.

SILOS

AND THE ONLY PATENT ROOF

The "Philadelphia."

Wood Tanks and Steel Structures
OF ALL SIZES.

E. F. SCHLICHTER,
1910 Market Street, PHILADELPHIA, PA.

PRINTING DONE

at the following prices:

Envelopes	100.	500.	1,000.
Letter Heads	30c.	\$1.00	\$1.50
Note Heads	40c.	1.25	2.00
Bill Heads	35c.	1.10	1.75
Cards	35c.	1.10	1.75
Send cash with order.	35c.	1.10	1.75

STAR PRINTING CO., Millboro Springs, Va.



WIRE - FENCE

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip Lock. In strength, appearance and durability, the Hard Steel cannot be excelled. Write for catalogue and prices. THE HARD STEEL FENCE CO., Cuyahoga Falls, O.



DOW FARM FENCE
PRICE AND QUALITY
WILL PLEASE YOU—
WRITE US NOW.
•DOW-WIRE WORKS-LOUISVILLE, KY.

AGENTS MAKE \$100

week selling cement fence post outfits. Posts cost 15c. All farmers interested. MACKAY & CO., 84 Washington St., Chicago.

Save The Posts

Old field pine made to last longer than cedar or locust by creosoting with dead oil of coal tar. The creosoting of lumber makes it practically indestructible, stops all rot and is absolute death to all insects. Write for prices to the NORFOLK CREOSOTING CO., Norfolk, Va."

SAN JOSE SCALE

and other INSECTS killed by

GOOD'S

Caustic Potash Whale-Oil Soap No. 3

Endorsed by U. S. Dept. of Agri. and State Experiment Stations. This soap is Fertilizer as well as an insecticide. 50lb. kegs, \$2.50; 100lb. kegs, \$4.00; half barrel, \$7.00; 2c per lb. barrel, \$2.10, 9c. Send for Booklet, JAMES GOOD, Original Maker, 959-51 N. Front Street, Philadelphia, Pa.

..Second Hand Bags..

Wanted. Any kind, any quantity, anywhere. I pay the freight. GEO. T. KING, Richmond, Va.



PERUVIAN GUANO,
The Richest Fertilizer Known,
Absolutely pure and from the
same islands it came 30 years ago.
No filler nor injurious substance in this
guano.

ANALYSES:

Chincha:	Lobos:
9.50 per cent. ... Lime...	18.50 per cent.
20.50 per cent. ... Bone Phos...	50.00 per cent.
8.30 per cent. ... Ammonia...	3.50 per cent.
2.00 per cent. ... Potash...	4.25 per cent.
9.00 per cent. ... Phos. Acid...	23.00 per cent.
Organic Matter and Ammonia Salts	
28.00 per cent.	13.00 per cent.

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Its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand. Not affected by heat. Get the Genuine FOR SALE BY ALL DEALERS.

Chemical Analyses
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WEEMS, Ph. D., Crewe, Va., Expert in
Agricultural and Industrial Chemistry.

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CORN BINDER, also
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Can be had cheap if applied for at once;
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Will either sell or exchange for hogs, mules
or horses. L. B. GILLILAND, JR., Clarks-
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For the treatment of THE LIQUOR, OPIUM, MORPHINE and
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OPIUM
and Whiskey Habits
cured at home without
pain. Book of particulars
sent FREE. B. M.
Woolley, M. D., Atlanta, Ga., 105 N. Pryor St.

TOOL BUYING.
The Difficulty in Buying Tools and
How Good Ones May be Recogn-
ized at a Glance.
It seems to be a rule that whatever
we absolutely must have is always at-
tended with inconvenience, and luxu-
ries that we really ought not to have
are perfectly easy to get.
It is an absolute necessity for us to
have a certain number of tools, such
as hammers, hatchets, axes, saws,
chisels, files, bits, scythes, draw knives.
How many of us are hardware ex-
perts?

How many of us can recognize a
good tool when we see it? Most of us
have to take the hardware man's word
for it, and if the tool is not satisfac-
tory, we lose.

This means not only the loss of the
tool, but a loss of time, which may
mean considerably more.
As very few manufacturers guaran-
tee their tools, we are obliged to take
the risk in almost every case.
Thirty-six years ago the Simmons
Hardware Co. saw the possibilities of
trade winning by putting on the mark-
et a complete line of trade-marked
tools backed up by a guarantee, taking
all the risk themselves. Profits are
smaller for this company, but they
have made it possible to get a hoe, axe,
plane, saw or knife or any other tool
with the assurance that it is perfect or
money will be refunded by the dealer
who sold it.

This brand of tools is called "Keen
Kutter," and as every kind of tool is
sold under that one name all you have
to do when buying tools is to mention
it, and you are sure of getting the
best.

"Keen Kutter" Tools were awarded
the Grand Prize at the St. Louis Ex-
position in 1904. The first and only
complete line of tools to secure such
an honor.

The Simmons Hardware Company
of St. Louis, Mo., and 298 Broadway,
New York, are the distributors, and
if your dealer does not keep them, they
will see that you are supplied.

EVERYTHING TO ITS USE.
No man in his senses would use a
four-horse harrow to smooth up a
pansy bed. This would not be much
worse, however, than using laundry
or toilet soaps for shaving. Common
soap, like the harrow, is intended for
coarse work. It will yank up the dirt
in fine style, but if used for shaving, it
will burn and irritate the face, and
make the operation of shaving a hor-
ror. You need a special soap for shav-
ing—one that will soften the beard
and leave the face cool and smooth—
such a soap as the famous Williams'
Shaving Soap, made by the J. B. Wil-
liams Co., Glastonbury, Conn., who
will send you a free trial sample if
you will write them. Their generous
offer appears in another column.

Mecklenburg Co., Va., May 9, 1905.
I can't do without the SOUTHERN
PLANTER. S. N. WILKINSON.

Make Your Idle Money Earn You Interest.

Write the **FIRST NATIONAL BANK**
of RICHMOND, VIRGINIA, for infor-
mation concerning its certificate of
deposit, so arranged that one per
cent. may be collected every **FOUR**
MONTHS through your nearest bank
or store.
Our experience proves this form for
savings to be the most satisfactory
plan yet devised for deposits of \$100.00
or more.
Our Capital and Surplus is
ONE MILLION DOLLARS.
JOHN B. PURCELL, President.
JNO. M. MILLER, Jr., Vice-Pres. & Cashier.
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DO YOU EVER INTEND TO BUY A
PIANO? If so, read this and buy now.
Never before have you had as fine an oppor-
tunity to buy a fine piano at such a great
sacrifice of price. We are to take inventory
and must reduce our immense stock. Here
is your life's chance. Look at these prices:
A fine \$500 upright.....\$345
A fine \$450 upright.....\$23.50
A fine \$400 upright.....265
A fine \$350 upright.....225
Square pianos at your own prices from \$20
to \$100. Organs from \$20 to \$55. Write us
to-day for full information and catalogues.
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103 E. Broad street, Richmond, Va.
ESTABLISHED 1879.
Oldest Music House in Virginia.

FARMERS Insure Your Buildings.

LIVE STOCK, PRODUCE, &c.
Write for booklet giving plan
and explaining how you can
become a member of the
Farmers Mutual Benefit Ass'n,
thus securing cheap pro-
tection. Property insured,
\$400,000; average cost per
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ited to Eastern Va.
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CHESTER, VA.
ORGANIZED JANUARY 9, 1899.

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283 Pp. Cloth, \$1.00; Paper, 50c.
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at the following prices:
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Mention the **SOUTHERN PLANTER** in
writing.

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Write us price you will sell delivered your station. Orders, wanted for Lemons, Limes, Oranges, and Bananas. Best stock at lowest prices. Reference Mercantile Bank, Norfolk, Va.,

Triune Fruit & Produce Co.,
24 Roanoke Dock, - - NORFOLK, VA.

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ALL KINDS OF

LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

DR. CECIL FRENCH,
718 Twelfth St. N. W., Washington, D. C.

100 Foxes Wanted.

The Mecklenburg Hotel and Mineral Water Co. will pay \$1.25 each for 100 good catch size Foxes. Write and express as above. Chase City, Virginia.

USE THE
ADJUSTABLE LIFTER
FOR STEWING PANS, F.E. TINS, STOVE LIDS, ETC.

Every housekeeper should have one. Instantly attached and detached. Holds pans firmly in any position. Dispenses with cloth holder in handling hot pans. No danger of being scalded or burned. Placed in stove lid it is always ready for use. Price by mail, post-paid, 15 cents. Address W. E. CONNER, & CO., 1303 W. Main street, Richmond, Va.

THOUSANDS OF CHILDREN

Suffer untold agonies from ring worm, ground itch, eczema, scalp eruptions and other itching diseases of the skin. Their parents can relieve these helpless little ones promptly by the use of Tetterine. 50 cents per box, all druggists, or by mail from the manufacturer.

J. T. Shuptrine, Savannah, Ga.
Bathe with Tetterine Soap, 25c. cake.

Italian Bees.

The kind that do the bustling. Guaranteed to work on Red Clover. Spring Colonies furnished at \$5 each f. o. b. cars here. In your choice of Root or Dabbenaker hives. The best comb honey hive on earth. Also Root's hives and supplies at Root's prices. Catalogue for the asking. Write me anything you wish to know about bees and their management.

J. E. Thomasson,
Bumpass, Va.

HINTS BY MAY MANTON.

There is a certain indefinable yet keenly felt charm about a surplice waist that renders its favor easy to comprehend. Illustrated is one of the latest, made with a separate chemisette which is well suited to all linen and cotton materials. The back is tucked after a most becoming manner, the fronts to the depth of a yoke, the fullness providing soft folds below, while the sleeves are the new ones that are tucked at the wrists and gathered at the shoulders. All seasonable waistings are appropriate, with the chemisette of embroidery, of lace of any all-over, or embroidered muslin in lingerie style. Madras, the new cotton grenadines, cotton taffeta, linen waistings and Scotch gingham all suggest



5027 Surplice Blouse, 32 to 40 bust.

themselves while there also are many others which might be mentioned.

The waist is made with fronts and back and is closed invisibly beneath the edge of right front, but the chemisette is quite separate and closed at the back and, can consequently be frequently and easily renewed. The sleeves are in one piece, trimmed at their lower edges with banding which matches that of the waist.

The quantity of material required for the medium size 4 1-8 yards 21, 3 3-4 yards 27, or 2 1-8 yards 44 inches wide with 3-4 yards 18 inches wide for chemisette, and 2 1-8 yards of banding to trim as illustrated.

The pattern 5027 is cut in sizes, for a 32, 34, 36, 38 and 40 inch bust measure.

Having Three Tuck Plaits on Back Edges of Front and Side Gores.

No fashionable material is more satisfactory for warm weather than mohair, inasmuch as it is light of weight, sheds dust and easily can be kept



SEED

Ruta Baga, Kale and Spinach, Cold Storage Potatoes, Cow Peas and Millets, Crimson Clover and all field and garden seeds.

DIGGS & BEADLES, Inc.
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Important to Truckers and Farmers

The "Jersey Lily" Potato

Introduced into this country last fall, from Jersey, England, and grown here for the first time. Being the earliest known potato, marketable seven weeks after planting and before blooming, it has commanded highest prices, and easily controlled the markets of England over all competitors. It is handsomely smooth and wax-like, and a heavy cropper. No mistake in buying seed now for a fall crop of these remarkable potatoes for your spring seed. It is the great money yielder of the islands whence they come. Address JAMES VIBERT, Menchville, Warwick county, Va.

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COLD GROWN, OWN ROOTS, EVER-BLOOMING, and the best of ALL STANDARD sorts, including RUNNERS. We grow NOTHING BUT ROSES and furnish them at ALL SEASONS in the condition that the SEASON and CLIMATE require. Write for free catalogue, containing full directions for ROSE CULTURE. We are anxious to please everyone, and especially those who cannot visit us and make their own selections. MERIT ROSE CO., Richmond, Va.

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Plants, VERY STOCKY. All plants are grown in rows 9 inches apart. Plants average an inch apart in the row, from imported seed. Golden Self Blanching, Giant Pascal, Winter Queen, White Plume, \$1.00 per 1,000; 70c. per 500.

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Plants \$1.00 per 1,000; \$7.50 per 10,000; 70c. per 500. Strong stocky plants, Danish Bull-head, Sure Head, All Seasons, Flat Dutch, Cauliflower. F. W. ROCHELLE, Chester, N. J.

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Bone Spavin, Bog Spavin, Ringbone or any kind of blemish—we have what you need to make a certain cure. Guaranteed always—money right back if it ever fails.

Fleming's Spavin Cure (Liquid)

for the soft bunches—Paste for the hard ones. A 45-minute application and the lameness cures. Lots of blemish information in the free book we send.

Fistula and Poll Evil

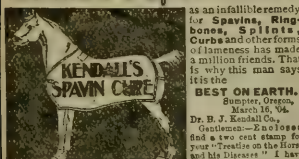
Do yourself what horse doctors charge big prices for trying to do. Cure Fistula or Poll Evil in fifteen to thirty days.

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is a wonder—guaranteed to cure any case—money back if it fails. No cutting, no scar. Leaves the horse sound and smooth. Write for our free book on diseases and blemishes of horses.

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Kendall's Spavin Cure



Kendall's Spavin Cure is two years and I find it the best I have used. I follow the horse doctoring business and have for years.

Price \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free or address DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

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will happen. The colts will get hurt. Any Soft Inflamed Bunch can be removed in a pleasing manner with

ABSORBINE

No blister. No hair gone. Comfort for the horse. Profit for you. \$2.00 per bottle delivered. Book 4-B free.

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NEWTON'S Heave, Cough, Diarrhea and Indigestion Cure. A veterinary specific for head, throat and stomach troubles. Strongly recommended. \$1.00 per can, of dealers, or Exp. prepaid. The Newton Remedy Co., Toledo, Ohio.

NO MORE BLIND HORSES.

For Specific Optalmia, Moon Blindness, and other Eye Sore, Barry Co., Iowa City, Ia. has a sure cure.

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How to put them up—what they cost—why they save you money—all information and valuable book free. Write to J. Andrae & Sons, 934 W.

Water St., Milwaukee, Wis.

clean, for all of which reasons it was selected for the making of this very graceful and attractive skirt, but the season nevertheless is a generous one, and the model can be made adaptable to many other fabrics as well. Pongee, Rajah and the Burlington silks are much in demand for immediate wear, while after a bit, linen will be having extended vogue, for all of which the design is admirable, while it also can be utilized for the various wool suitings. As illustrated the trimming is banded and handsome buttons, the straps, which serve a practical end as well as an ornamental one, being



5034 Nine Gored Walking Skirt,
22 to 32 waist.

held in position by buttons which are small and flat.

The skirt is cut in nine gores, and is laid in groups of three backward-turning plaits, which are stitched with corticelli silk from the upper edges to the straps to give a tuck effect while below that point they are pressed to position. The fullness at the back is laid in inverted plaits that meet over the seam and beneath these plaits the closing is made.

The quantity of material required for the medium size is 10 1/2 yards 27, 6 1/4 yards 44 or 52 inches wide when material has figure or nap; 6 1/2 yards 27, 5 1/4 yards 44, or 4 yards 52 inches wide when material has neither figure nor nap.

The pattern 5034 is cut in sizes for a 22, 24, 26, 28, 30 and 32 inch waist measure.

We can furnish these patterns at 10 cents each, post-paid.

THE SOUTHERN PLANTER,
Richmond, Va.

ALWAYS RECEIVED GOOD RESULTS.

Woolsey, Va., Jan. 31, 1905.
The Lawrence-Williams Co., Cleveland, Ohio:

I have used your GOMBAULT'S CAUSTIC BALSAM for bunches on horses' legs, lameness and scratches, and always received good results from it.

H. F. LYNN, JR.



GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puils, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

SPECIAL.

All who desire to keep consumption from their homes, children or friends, or have care of those already afflicted, should write for free directions to the

Virginia Sanatorium for Consumptives, Ironville, Virginia.

A benevolent institution for care of the poor consumptive and for the protection of the community.

All are invited to membership.

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ELEVEN HUNDRED DOLLARS for a term of 5 or 10 years on a Real Estate Mortgage; Property is worth about \$2,500; I will pay liberal interest for this loan. Address Business, care Southern Planter Office.

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"The Wealth of the Wilderness." A 23 page pamphlet, by Geo. Edward Allen. Price, 5c. It's worth it. THE SOUTHERN PLANTER, Richmond, Va.

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FOR EVERYTHING: NEW OR SECOND-HAND; SOLD OR RENTED. Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.

Northern Virginia Farms

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 16.—130 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$50 per acre.

No. 40.—133 acres; one mile from town, on fine MacAdam road. Nice 7 room house, 3 porches. Good well and springs. Good barn, with stalls for 10 cows and 6 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land sandy loam and clay. Two acres in orchard; trees in full bearing. Price, \$5,000.

No. 41.—26 acres; 10 miles from Washington, D. C.; 2 miles from an electric and steam railroad. Thirteen room house in nice shaded lawn, 2 cellars, well at house. Nice orchard, in full bearing. All necessary out-buildings in good repair. Price, \$3,500.

No. 42.—30 acres; an elegant brown stone house, with 6 rooms, 2 porches. Three acres young orchard, in full bearing. All necessary out-buildings, in good repair. A large stone building, 20 x 40, sets all a haul, has 29 foot water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$2,200.

No. 47.—100 acres; 2 1/2 miles from railroad; 90 acres cleared, all level and in fine state of cultivation. New 5 room house. Stable for 4 horses and 6 cows. Young orchard. Good well house, and on popular dirt pike, in Loudoun county. Price, \$2,500.

No. 50.—480 acres in Loudoun county, in the best grazing section of the State, all in grass; 12 room residence, situated on elevated ground, with a large shaded lawn. An elegant large orchard in full bearing. Stabling for 60 cattle, farm grazed and fattened 65 export cattle last season. Well fenced, and an abundance of running water. Price, \$44.00 per acre.

No. 62.—636 acres excellent grazing, cleared land, well set in grass, and a little rolling. 260 acres fine white oak timber, balance of land cleared. Nine room house, bank barn 20 x 40, sheep house 20 x 20, and all a haul, farm houses, all in good repair. Large orchard of all kinds of fruit, in full bearing. Farm watered by springs and streams; water in all the fields; land is all well fenced; has now about 40 large cattle, in addition to sheep, horses and colts. Price, \$16.00 per acre. Easy terms.

No. 63.—616 acres, natural Blue Grass land; well fenced, elegant well water. Good 5 room house, with all the necessary small farm houses in good repair; good sheep barn 20 x 40. Thrifty young orchard of apples, peaches, pears and cherries. Land is all in grass, except about 40 acres, that is in corn now. Close to schools, church, mill and post-office. Four miles from railroad. This farm usually produces from forty to fifty export cattle in September. It is located in a beautiful section of the county of Loudoun, 25 miles from Washington, D. C. Price, \$15.00 per acre; one-third cash.

No. 65.—30 acres; 16 acres in timber, balance cleared. Good 4 room frame house; excellent well in yard; nice shaded lawn; one-half mile from school, church, stores, mill, post-office and shops. Thrifty young orchard beginning to bear; good grass land; well fenced. Situated on 60 foot Macadamized Pike. Price, \$500.00, on easy terms.

No. 66.—Large merchant mill, new process, all modern improved machinery, cost about \$14,000; situated in one of the finest sections of Northern Virginia, two and one-half miles from railroad. Ample water power in ordinary seasons, but fitted up with a special engine and cog wheels, never fails the event of a drought. For sale to settle an estate. Write for full description. Price, \$7,500.00, on very easy terms.

Write for full information and price list of other farms.

W. E. MILLER, Herndon, Va.

SPECIAL RATES FOR THE STATE FARMERS' INSTITUTE.

The second annual meeting of the Virginia State Farmers' Institute will be held in Roanoke on July 12th, 13th and 14th. A single fare has already been granted on the Norfolk & Western system, and negotiations are in progress for similar concessions from the other railroads. The programme is now being prepared, and no effort or expense will be spared to secure the best speakers possible for the occasion. The officers of the Convention the present year are as follows: Ex-Governor J. Hoge Tyler, President, East Radford; T. O. Sandy, First Vice-President, Burkeville; John T. Cowan, Second Vice-President, Cowan's Mills; Andrew M. Soule, Dean of the College of Agriculture and Director of the Experiment Station, Secretary, Blacksburg; J. M. Williams, Industrial Department, Norfolk & Western R. R., Assistant Secretary, Roanoke.

Arrangements have been completed for a special train to visit Blacksburg on the last day of the Convention, so that all the delegates may have an opportunity of examining the work of the College of Agriculture and the State Experiment Station located there, free of cost. This is an opportunity that has never been offered to Virginia farmers before. A lunch will be provided for the visiting delegates by the college authorities, and every effort made to give them an opportunity to fully inspect the work in progress in the various departments of the college and station. Do not fail to attend. You will be well repaid for any sacrifice you may make and go back home with new ideas which you can put in practice to the great advantage next year. It is inspiring to come in contact with your fellow-farmers. You have plenty of time to come, and you can afford to spend the small amount of money necessary in view of the special rates obtained. Now is the time to obtain up-to-date knowledge at a trifling cost. Now is the time to get in touch with the work of the Experiment Station and become a live factor in building up and rejuvenating the agriculture of Virginia. For further information apply to Andrew M. Soule, Secretary, Blacksburg, Va.

MADE A VALUABLE HORSE OUT OF A WORTHLESS ONE.

Mr. T. F. Kingery, Montrose, Ill., writes under date April 11, 1904: "The Absorbine received of you for bog spavin worked like a charm. One bottle made a valuable horse out of a worthless one, and I got good money out of him. I also took a bad lump off a fine filly with one bottle of your Absorbine. I don't want to be without Absorbine in my barn. Find enclosed \$2.00 for another bottle." No blistering, no hair gone, and horse can be kept at work. Absorbine can be procured at your druggists, or I will send bottle express prepaid upon receipt of \$2.00. W. F. YOUNG, P. D. F., 109 Monmouth street, Springfield, Mass.

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Where Health, Climate, Soil, Location and markets are unsurpassed. Any size, place and price to suit the buyer of a stock, truck, fruit, poultry or fish and oyster farm. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for fact 36 P. pamphlet giving full particulars.

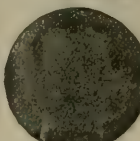
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C. & O. Main St. Depot. - - Richmond, Va.
ESTABLISHED 1875.

I WANT TO BUY

a small farm on tract of land, 20 to 100 acres, with or without buildings; would prefer being on or near water, but location must be high and dry, and near town, post-office, schools, good markets, etc. Wherever I locate other families will follow.

Send complete description, legal or otherwise, and mention flaws in title (if any), and quote the low rock bottom cash price when writing, as I am anxious to get settled at once. FRED. W. WOLF, Genoa Junction, Wis.

I Can Sell Your Real Estate or Business, NO MATTER WHERE LOCATED.



Properties and business of all kinds quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same.

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Real Estate Specialist,
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Grain, Fruit, Dairy and Blue Grass Farms of every Class within one hour of Washington, D. C.

LOUDOUN COUNTY Farms a Specialty

Catalogue on application.

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Home Seekers and Speculators.

I am in position to show you the largest list of properties you can find in Northern Virginia, consisting of STOCK, GRAIN, DAIRY, FRUIT, POULTRY, TRUCK, and BLUE GRASS farms, VILLAGE HOUSES and BUSINESS SITES all within 1 to 2 hours of the National Capitol. For free catalogue and full particulars, call on or address W. H. TAYLOR, Herndon, Va.

WE CAN SELL

YOUR FARM

NO SALE, NO CHARGE.

If you want to buy, write for free catalogue.

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FINE FARMS in the great fruit and stock section of Virginia. Fine climate and soil, in the U. S. Near great markets, with best educational advantages. For further information, address
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with improvements. Much land now being worked has paid a profit greater than the purchase price the first year. Long Summers, mild Winters. Best shipping facilities to great eastern markets at lowest rates. Best church, school and social advantages. For list of farms, excursion rates, and what others have accomplished, write to-day to

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Homes for ALL; Health for ALL. Happiness and independence for ALL. All classes of FARMS at corresponding prices, but ALL reasonable.

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suitable for general farming and stock raising, in Southwestern Virginia, western North or South Carolina, or POSITION AS HERDSMAN or farm manager, by an experienced farmer and stock breeder. Address M. L. SPRINGER, Lake Fork, Ohio.

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EASY PAYMENTS. CATALOGUE FREE

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FARMS of every description. Good lands. Low prices. Liberal terms. Convenient to churches, schools and railroads. A very mild climate. Write for our new catalogue. CASSELMAN & CO., Richmond, Va. P. O. Box 267.

Go South.

For full particulars write
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Virginia Farm Agency.

If you want to buy, sell, rent or exchange a farm or a suburban home, see
J. R. HOCKADAY & CO., 812 E. Main St.,
Richmond, Va.

Productive Farms.

Hanover county, between the mountains and Tidewater. Land and seasons conducive to successful farming. FRANK H. COX, Ashland, Va.

••• VIRGINIA FARMS •••

Nice little poultry farm, 100 acres, good house and orchard, \$600.00. Blue Grass. Stock and Fruit Farms. Address PORTER & GATES, Louisville, Va.

BEEF TRUST INVESTIGATION.

Mr. Garfield's recent report to the President shows that six concerns with a capital aggregating about \$90,000,000 practically monopolize the dressed meat industry of the whole country. These concerns have very close affiliations with one another.

Proceedings in the highest judicial tribunals have shown this combine to be illegal as well as iniquitous, and there is a growing demand that its exactions shall be suppressed by the strong arm of national authority.

These concerns operate on such an enormous scale that they have great advantages, even on a basis governed by the natural laws of trade. The vast magnitude of their operations enables them to economize in many items of expense.

And by utilizing with profit all the by-products and refuse of the packing industry, they have sources of gain unknown to small competitors. Every portion of an animal is used—the bristles, hair, bones, hoofs, blood and viscera are all put in some marketable form and sold at a profit.

This advantage is allowable, but there are absolutely illegitimate stealings against which the public is now loudly protesting. Some of these are:

1. Through their control of the markets they buy live stock from the farmers and ranchmen at prices much lower than should be paid, being enabled to do this by stifling all competition from outside buyers.

2. They obtain large rebates of freight charges from most of the railroads of the country which are not allowed to their small competitors in the same line of business, and which constitute another effective means of stifling competition in their products.

3. They are able to sell their prepared meat products at much higher rates than the market, through their power to practically monopolize the business of furnishing dressed meats to consumers throughout the country.

Each of these illegitimate sources of profit becomes possible to the members of the beef trust from their gigantic operations and the contracts they are able to make with railroad companies.

They thus have many advantages over producers of live stock, competitors in the meat packing business and consumers of meat products. The consequence is that all classes of people have become indignantly hostile to a further continuance of this costly despotism.

Whatever heroic measures are necessary to reach, punish and annihilate this tremendous abuse will, in the opinion of the Sentry, be warmly supported by an overwhelming majority of the people of the country. To farmers, this movement appeals with special force.—The Sentry.

Always mention the Southern Planter when writing advertisers.

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It should be soft and smooth after shaving. If it isn't you are not using

WILLIAMS' SHAVING SOAP

Sold everywhere. Free trial sample for 2-cent stamp. Write for The Shavers Guide and How to Dress Correctly."

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in Virginia. Give full description, buildings, soil, location; what fitted for; size, price, distance from railway station, and village, whether worn out or now fertile. Address JOHN SUTHERLAND, 720 Phoenix, Minneapolis, Minn.

WANTED

TENANT with good teams for year 1906 for a farm of 100 acres, part river bottom. Cottage and outbuildings. Plenty of fire wood convenient. Running water at door. Address G. G. LECKIE, Abert, Bedford Co., Va.



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Chas. B. King, Pres., Charlotte, N.C.



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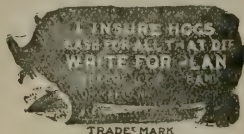
"From the breeding pen through the shell to maturity."

Contains the experience of the world's leading poultrymen, and all the latest and most trustworthy information about hatching, rearing, fattening and marketing chickens. Price, 50c. The SOUTHERN PLANTER, Richmond, Va.

FREE TRIAL FOR 30 DAYS

Any reader of this paper remitting direct to me for a can, or half can, of my Hog Remedy at below prices, and giving same a fair trial for 30 days, may at that time have his money refunded if he is not satisfied that his hogs have been benefited; that it will do all that I claim for it, and that it is the best hog remedy he has ever used.

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PREVENTS AND ARRESTS DISEASE, STOPS COUGH, EXPELS WORMS AND PAYS FOR ITSELF MANY TIMES OVER WITHOUT EXTRA FEED. It is the pioneer and peer of all preparations on the market for hogs—28 years' success.

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Latest revised edition, "Hogology," my book about hogs, will be sent FREE if you mention the Southern Planter when asking for it. Many new and important subjects have been added and every phase of swine raising, from start to finish, is covered in a thorough and practical manner.

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kills lice and vermin on poultry and stock; 25 cents per box; mailed, 35 cents.

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Kills Hawks, Cures Cholera.

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...AND...

Makes Hens Lay.

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Tarboro, N. C.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

CORN GROWING IN VIRGINIA.

This is the title of a bulletin just issued by the State Department of Agriculture. It has been prepared by Prof. A. M. Soule, Director of the Virginia Experiment Station, and is one of the first fruits of the co-operation of the Department of Agriculture with the Virginia Experiment Station which we have so long advocated but which until through the action of the Constitutional Convention we were unable to bring about on account of the unreasonable jealousy of the late and present Commissioners of Agriculture. Through the action of the Constitutional Convention and upon our urgent representation before the committee of that body the President of the Agricultural College where the Experiment Station is located and of which it is a part was made an ex-officio member of the State Board of Agriculture and the President of the State Board of Agriculture an ex-officio member of the State College Board and thus co-operation in work was insured and the aid of the scientific experts of the College and Station secured in the work of the State Board. This bulletin is the most valuable bulletin ever issued by the Board, in the interest of the State. It shows conclusively that Virginia can produce corn cheaper than any of the States in the corn belt and of a quality that excels that of any of the States in the corn belt. It should lead to a great increase in the production of corn in the State and if distributed widely throughout the country will no doubt bring large numbers of settlers into the State. An edition of at least 25,000 copies should be printed for distribution in the State and a like issue for distribution outside the State. If issued in this way it will do more to help the State than any number of copies of the recently issued report of the State Board.

THE FONTAINE SHOCK BINDER.

In these days of scarcity of labor and high wages, farmers naturally turn to any labor saving device offered them. The Fontaine Shock Binder very easily comes under the head of a labor saving device in that it dispenses absolutely with the services of one man in shocking corn and other grain.

Look up the ad. of this company and send for a neat, descriptive pamphlet.

CURES CURBS, RINGBONES AND CRAMPS.

Baldwin, Kas., Nov. 3, 1904.
Dr. B. J. Kendall Co., Enosburg Falls, Vt.:

Gentlemen—I have a young horse with curb and ringbone and used two bottles of Kendall's Spavin Cure with most satisfactory results. While using this on my horse I had a patient with a chronic cramp in the leg; I used the Spavin Cure on him with immediate results.

Very truly yours,
F. M. MAHUT, M. D.

COOPER'S SHEEP DIP

Standard of the World
for 60 years. Used on 250 millions annually. *One dipping kills Ticks, Lice and Nits.* No smell. Keeps flock clean a long time. Increases growth of wool. *Dipping Tanks at cost.*
Send for Pamphlet to Chicago.
If local druggist cannot supply send \$1.75 for \$2 (100 gal.) pkt.
JOHNSSON & STOKES, Phila., Pa. G. A. KELLY CO.
Pittsburg, Pa. Cyril Franklyn, 72 Beaver St., N.Y.

Latest Discovery of the Age For Poultry.



Royal Poultry Mixture is a sure cure for cholera, roup and gapes, and the greatest egg producer on earth. Royal Stock Food is a perfect conditioner for stock. Royal Lice Killer greatest insect destroyer known.

A trial package will convince the most doubtful of the merits of Royal.

Royal is sold under an absolute guarantee of satisfaction or money refunded.
For sale by ROBERT B. MINOR, Gen. Agt., 1019-1021 Cary St., Richmond, Va.
Agents wanted.

PRESERVE

Eggs For Winter.

Experience has proved that Water Glass is the most satisfactory material for preserving eggs. No change in the quality of the eggs at the end of a year. For prices and other information write to J. B. WEEMS, Crewe, Va.

SCOTCH COLLIE PUPS

Another litter now ready from our brag stock dogs, Bruce and Gwen. Trace to Ormskirk Emerald, Christopher, and Seton Hero. Walnut, sables and blacks, full white marks. EDGEWOOD STOCK FARM, H. M. ARBUCKLE, Maxwellton, W. Va.

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Champion blood of England and America. Puppies now ready to ship. Also bitches in whelp for sale. FARMVILLE COLLIE KENNELS, Farmville, Va.

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15 EGGS ONLY 75 C.

From choice pure-bred S. C. BUFF ORPINGTONS or R. C. WHITE LEGHORNS.
Order direct from Ad. Satisfaction guaranteed. T. M. KING, Hagan, Va. R. F. D. No. 2.

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I am prepared now to furnish STOCK or BREEDING EWES in ANY NUMBER and ANY KIND. I will sell reasonably and GUARANTEE SATISFACTION.

Write for my Free Catalogue on the Sheep I handle; this tells all about them.....

All orders promptly and carefully executed.

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All kinds live stock sold on Commission and Highest market values always obtained. Quotations accurate.

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We are offering a better lot of **RAMS, EWES and LAMBS** than ever. Prices right. J. D. THOMAS, Meadow Brook Farm, Round Hill, Va.

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Woodlawn Farm has a few of the best rams it has ever offered. Wool is an item worth considering this year, and our rams are exceptionally heavy shearers, besides having excellent mutton forms. J. E. WING & BROS. Mechanicsburg, O.

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Lambs for sale; also 6 ms. old Holstein-Friesian Bull Calf. J. H. FRASER, Cartersville, Cumberland Co., Va.

A PUBLIC DUTY.

Scarcely more than a generation ago the buffalo ranged the Western plains in countless herds, their numbers so great that no written estimate can be considered an exaggeration. Those who were fortunate enough to see one of these great hosts surging over the prairies little thought that in a few short years the buffalo would simply be a part of history. This noble beast was exterminated by man with a butchery so ignoble that it is sickening to dwell upon. The few dollars received for the hide was the incentive for this national disgrace. Almost at the same hour that the buffalo were vanishing another of the wonders of this continent was also being ruthlessly and recklessly destroyed. Early writers tell of flocks of wild pigeons so large that the account of their numbers verges on the fabulous. Where are these countless winged hosts today? All gone. Why? Simply that a limited number of men without thought for the future, might gather a few dollars by sacrificing millions upon millions of harmless and beautiful forms.

These two great assets of the people, of use and beauty, were improvidently wasted because no public-spirited persons or association had the foresight or interest to protect them from the small band of selfish men who were the destroyers.

The passing of the buffalo and wild pigeon is a forceful commentary on the indifference of the people of those days. Are the people of this generation showing any greater degree of interest in the wild life of the present day, much of which is rapidly decreasing in numbers? Few people realize how near the gulls and terns of our coasts came to extinction during the last decade, when fashion decreed that the snow white plumage of these beautiful denizens of the beaches were necessary for millinery ornaments.

A simple proposition, in fact a public duty, is now before the American people: Shall the sea-birds be preserved for future generations? Unfortunately this class of birds gather in colonies during the breeding season, and are thus in greater danger than the wild bird that breeds singly. Plume hunters can still kill them as in the past, when large colonies on our seaboard were destroyed in a single season. Another method of extermination is eggging; this is quite as fatal as killing the birds. There are yet small colonies of sea-birds on the coasts and large inland lakes of the country which will serve as a nucleus and may by the greatest care and watchfulness repopulate our country with these birds. If this desirable result is to be achieved, action must be taken at once by the public; it will not do to neglect the matter another season or our children will say of us, what we now say of our fathers regarding the buffalo and wild pigeon, when you had the opportunity to save the sea-birds you did not do it and we are deprived of a part

Come and See as good

PERCHERONS

of both sexes as France can export, no \$3,000 monstrosities, or the "Culls" of Europe, but good big straight horses, at figures that will pay the purchaser.

SHORTHORN

cattle as good as the best at reasonable prices.

BERKSHIRES

of both sexes. A few Kentucky saddle horses, good ones.

JOHN F. LEWIS.

Lynnwood Stock Farm, Lynnwood, Va.

Thoroughbreds FOR SALE.

BURT, foaled 1901. Bay colt, by Aurus. Cara Bill, by imp. Charaxus.

FLORENCE GLENN, foaled 1898. Chestnut mare, by Linsey Woolsey—Thelma, by imp. Esber.

AGNES GRAY, foaled 1901. By Jim Gray, St. Olga, by imp. St. Blaise; 2d. dam Oltipa, by imp. Leamington; 3d. dam, by Lexington; 4th dam, by imp. Glencoe, etc. Agnes Gray now has a filly foal by imp. Potentate.

HANNAH C., foaled 1902. Bay filly by Aurus. Kathleen Gray, by Jim Gray; 2d. dam, Katie C., by imp. Charaxus. I also have others from one to two year olds, by imp. Waterlevel and imp. Potentate. None of them have been trained or raced. S. H. WILSON, Byrdville, Va.

HORSE AUCTION

400 head of DRAFT and PERCHERON horses from 2 to 4 years old. Wednesday, July 12, 1905. Write or wire for circulars. J. F. COOK & CO., Lexington, Ky.

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3 PURE BRED YEARLING SHROPSHIRE BUCKS.

7 LARGE SHROPSHIRE BUCK LAMBS, 2 REG. ABREDEEN-ANGUS CALVES, 5 mos. old, 1 male, 1 female. Prices reasonable. S. S. HEPBURN, Kennedyville, Md.

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Berkshires

for present and future delivery, for sale. My HIGHCLERE Sow has a fine litter: my great-granddaughter of LOYAL BERKS is due to farrow in a few days, while my granddaughter of MANOR FAVORITE will farrow in a month. My Imported COLUMBIA, a son of the great English Boar, PHIST CATHER, and a full brother to JULIUS CAESAR, is the sire of all. Don't fail to book your order at once for some of this great blood. I assure you that prices will be right. F. M. HODGSON, West End, Va.

BULL CALF FOR SALE

Sire Rioters John Bull No. 65019, Dam King's Mattie Matilda, No. 150655. Dropped October 29, 1904.

ENGLISH BERKSHIRES. Stock from parents that have sold for \$1,025. Two litters farrowed Dec. 30, 1904, and March 3, 1905. Price, &c., upon request. COTTAGE GROVE FARM Box 17, Greensboro, N. C.

BERKSHIRE I offer some exceedingly choice
BOARS. young boars for sale; by Imported Danesfield Tailor, 76940 and out of Biltmore bred sows. It will be hard to find better or cheaper stock.

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In this herd are twelve royally bred IMPORTED animals. Also selected American bred stock. Our IMPORTED boars Highside Royal Victor and Loyal Hunter won first at Eng. Royal and Va. State Fairs, respectively. A splendid lot of pigs of gilt edged breeding now ready for shipment. Dr. J. D. KIRK, Roanoke, Va.

HOLLYBROOK FARM**Berkshire Pigs.**

We have a few first class young boar and sow pigs for sale. Write for prices. HOLLYBROOK FARM, P. O. Box 330, Richmond, Va.

Berkshires.

No more Berkshires for sale at present. I thank all friends for their liberal patronage. Beagle Hound pups, 8 mos. old, from small pure bred parents, good workers in the field, for sale. Address ROBT. HIBBERT, Charlottesville, Va.

Berkshire Pigs

Hawkesley Stock Farm has them of the best breeding: fine individuals. J. T. OLIVER, Prop., Allen's Level, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

of our heritage. The sea-birds can only be saved by placing at each colony, during the breeding season, an energetic, faithful and fearless warden, who will stand guard during the three months when the birds are brooding their eggs. The part the public can take in this great economic and aesthetic movement is to supply the necessary funds. The National Association of Audubon Societies, an incorporated body, will do the administrative work.

During the present breeding season this Association has forty such wardens employed, but this number should be increased to at least 300 men in order to fully guard all of the remnants of colonies that once existed. The public are urged to join the National Association, the membership fee being five dollars a year, all of which sum is used in bird protection work, as the executive officers of the Society contribute their services without compensation.

The seashore without the sea-birds would be like a garden without flowers or a landscape without trees. Unless active measures are taken now to prevent this disaster it will surely come; then, reader, it will be too late to do more than grieve. This is not a duty you can delegate to your neighbor, it belongs to you; will you help save the sea-birds, or will you see them vanish? To your descendants you are responsible.

WILLIAM DUTCHER, President N. A. S., Office 525 Manhattan Ave., New York city.

THE CARE OF THE HORSE.

He deserves the best care you can give him. The first thing to do is to learn all you can about him. Particularly, you should know what ailments he is most subject to, and how best to treat them. You cannot afford to rely upon the services of a veterinary. Many times you cannot procure a veterinary. Many other times you can treat your animal just as well yourself if you have learned something of the nature of horse ailments in advance. In this connection we suggest the little book, "A Treatise on the Horse and His Diseases," as being the most accurate and valuable treatise in compact form on the nature and treatment of common horse ailments. It can be procured free from almost any druggist, or by sending to the publishers, the Dr. B. J. Kendall Company, Enosburg Falls, Vt. Some standard remedy should also be kept on hand. Many horsemen contend that nothing has ever been compounded to take the place of Kendall's Spavin Cure. It has been in constant use for upwards of thirty years. It is more popular to-day than ever. Many never think of using any other remedy to cure all those characteristic horse ailments which are most common, such as spavins, ringbones, galls, barb wire wounds, sores, lamenesses, etc.

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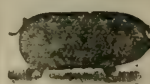
EIGHTEEN

Duroc = Jersey

pigs at farmer's prices—\$5 each. ANGORA GOATS, 1 Buck and 6 Does, for sale cheap. Write for price on the lot. J. D. DILLON, Purcellville, Va.

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PIGS FROM THE GREATEST WINNING STRAINS. The best hog for all purposes for many reasons; quality guaranteed; prices right. LESLIE D. KLINE, Vacluse, Va.



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I have on hand some fine Essex pigs (sows only, 8 weeks old) ready for delivery by May 10th; also a few Poland China pigs for June delivery, Southdowns for June and July delivery. Your orders solicited. L. G. JONES, E. F. D., 1, Tobaccoville, N. C.

Registered P. Chinas
C. Whites
Bred sows, Service boars, Guernsey calves, Scotch Collie pups, and Poultry. Write for prices and free circulars. P. F. HAMILTON, Cochranville, Chester Co., Pa.

**Chester White Hogs,**

Best hog on earth at farmer's prices. S. M. WISECARVER, Rustburg, Va.

MAPLEWOOD HERD**Pure-Bred Berkshires.**

Choice individuals. Selectly bred. Write for prices, stating your wants. JOHN F. TUCKER, Smyrna, Tenn.

POLAND-CHINA PIGS.

Some fine ones young sows, bred, young boars and pigs. No better breeding in the United States. By hand bred sows have been sired by J. H. Sanders, Lookmeover. Perfect I Know, Proud Perfection, Corrector, and High Roller, the greatest prize winners of the breed—my sows have been as carefully selected.

RED POLLED CATTLE. Fine, good young bulls. Will sell a few cows and heifers. ARROWHEAD STOCK FARM, Charlottesville, Va., SAM'L B. WOODS, Prop.

Orchard Hill Pure-Bred POLAND-CHINAS.

2 brood sows bred and some nice 2 mos. old pigs for sale; also 2 fine GUERNSEY BULL calves, whose grand dams stood the advanced Registry test of 348 pounds or more in 1 year. F. M. SMITH, JR., R. F. D. 4, Charlottesville, Va.

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with the BUSINESS HAMS.

Large, mellow, easy keepers. Bred right and sure to please. SUNSHINE, U. S., PERFECTION and TECUMSEH blood. A few Spring pigs of both sexes, eligible to registry, for sale.

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A FEW PURE BRED

Poland-China Pigs

for sale. Only good individuals shipped.

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ONE REGISTERED

BERKSHIRE SOW

with 8 pigs for sale or exchange; also one new U. S. CREAM SEPARATOR, cost \$150. ALBERT O. MAYS, Fredericksburg, Va.

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**Thoroughbred Horses
AND SHORTHORN CATTLE,
Pure Southdown Sheep
and Berkshire Pigs.**

FOR SALE. R. J. HANCOCK & SON,
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**Berkshire Boars,
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All stock in best of condition and guaranteed as represented.

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Elkton Stock Farm,

LOCATED ON NORFOLK & WESTERN R. R.
12 Miles W. of Lynchburg.

Breeders of Pure Bred, Registered

HEREFORD CATTLE

AND

BERKSHIRE HOGS.

Young stock for sale at all times, at reasonable prices.

All statements and representations guaranteed.

LONG DISTANCE TELEPHONE.

FOREST DEPOT, VIRGINIA.

A tall, fine-looking colored woman stood in the doorway inquiring for the Doctor. I sent her to the cook's cabin to await him. Shortly after, passing Aunt Nellie's, the cook's, door, I saw the two sitting most amicably together, eating sweet potatoes and smoking pipes.

Repassing, I found Aunt Nelly speeding the parting guest:

"Good-by, 'Mandy. Give Jim my 'gards and bring him next time you come."

Then, turning to me as Amanda crossed the yard, she said:

"Does you know, Miss Alice, who dat is jest gone out 'yere?"

"Who is it?" I asked.

"Dat's my husband's wife."

"Your husband's wife?" I gasped.

"Yes, ma'am. Me and Jim was married a long time, an' we lib happy and neber hab no trouble to speak of, and the two chillens was big, when Jim got religion, and after dat, I 'clare to you it's de trouf, I neber hab one more day's peace wid dat man. He neber do no mo' cussing nor slinging tings about, but he everlastin' groan, like his liber was out of jint, an' nothing didn't seem to suit him. I says to him, 'if you jist lay aside your feelin's an' dance a real good breakdown, you'll feel better,' but he 'lowed I was in the bonds of 'niquity—whatever dat is.

You see, Jim's religion struck him powerful hard. It doesn't offend come as bad as dat. Well, I stood him long as I could, 'tinking it would kind of wear off, but when dar wasn't no peace, winter nor summer, I tole him to saddle up de boss, and we would go down to Boggy Depot and get unjined. Der's a man down dere wid legal permission from the gove'nmint to unjine folks dat's put togedder wrong. We come home, full of peace. Den, after a suitable time of mourning, he sets up to Mandy, an' I do say for her dat she makes him a fust-class wife. 'Ca'se when she married, his spells had kind a-wore off an' he was taking his religion mo' easy."

Much amused, I said: "Did you ever marry again?"

"Me? Law! Miss Alice, No. Dey talk 'bout 'sperience at camp-meeting, but taint nothin' to the 'sperience of marryin'. Co'se I'se had offers—ain't I de bes' cook in de settlemint?"—Lippincott's.

ALL SIAMESE GIRLS GET MARRIED.

In Siam if girls do not marry before a certain age the king takes them in charge and finds a husband for them. This is a simple thing to do, for he goes through the list of prisoners in the jails, picks out one man, and tells him he can have his liberty if he will marry one of these girls.

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Stock For Sale.

$\frac{3}{4}$ and 15-16 GRADE ANGUS Bull and Heifer Calves, \$25.00 to \$30.00 each.

1 BULL CALF out of Shorthorn Cow, by Angus Bull, \$25.00.

1 splendid dark bay mare 7 years old, perfectly reliable everywhere, weight 1100 lbs. Price, \$150.

1 pair of BROWN GELDINGS, coming four years, well matched, well broken and well grown for their age, a first class allround farm and driving team, perfectly reliable, price \$300.

Several fine family milk cows, fresh, price \$50.00 to \$60.00 each.

WHITE PLYMOUTH ROCK and SILVER LACED WYANDOTTE eggs, \$1.00 for 15.

8 beautiful pure bred Llewellyn Setter Pups for sale at \$5 each. None better at any price.

W. M. WATKINS & SONS, Saxe, Va.

... Registered ...

Aberdeen Angus,

Bull for sale. A splendid animal, all right in every way, fit to head any herd. For price and breeding, address L. G. JONES, R. F. D. 1, Tobaccoville, N. C.

MONTEBELLO HERD

ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va.



High-Class

Aberdeen Angus.

Choice males, suitable for heads of most select herds. Send for printed description.

JOHN T. & O. B. MANLOVE,
MILTON, IND.

Rose Dale Herd

Aberdeen Angus.

Top notch young registered Bulls our specialty. A few heifers to offer with bull not akin. We send out none but good individual calves. Correspondence and inspection of herd invited. ROSE DALE STOCK FARM, Jeffersonston, Va.

ABERDEEN ANGUS BULL

coming 3 years old, for sale; fine individual, will weigh 2,000 pounds when in fair flesh.

... Also 36 Grade ...

ABERDEEN ANGUS HEIFERS and COWS, all bred to above Bull; none over three years old. Will sell at a bargain. Address T. H. McCLAY, Agt., Birdwood, Albemarle county, Va.

REGISTERED

GUERNSEY BULL

CALVES of the best

milking strains for sale. Descendants of PAT of HADDON and IMP. ISLAND CHAMPION. G. M. WALLACE, Falmouth, Va.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS AND HEIFERS.

Name better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, 25 lbs. Heifers, same age, 35 lbs. POLAND CHINA PIGS, 5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battlersburg, N. C.

DEVON HERD HAMPSHIRE DOWN FLOCK.
ESTABLISHED 1854. ESTABLISHED 1880.

DEVON CATTLE

BULLS and HEIFERS.

Hampshire Down Sheep.

RAMS and EWES.

ROBERT J. FARRER, Orange, Va.

PLEASANT VALLEY STOCK FARM**Shorthorn**

calves from fine milking stock.

Yorkshire Pigs

of prolific breed.

JAMES M. HOGE, Hamilton, Va.

SHORTHORN BULL

To avoid inbreeding, I will sell or trade for a bull of equal breeding, any royally bred herd bull, ROAN DUKE, 140096, by Golden Rule, 98268, out of Lavender of Hill Farm, 10th, bred by J. F. Prather, of Illinois. As name indicates, he is a roan; calved January 29th, 1898; is kind and gentle; not given to rambling; large and a magnificent breeder. For extended pedigree, etc., address WM. E. PEERY, Five Oaks, Tazewell county, Va.

SPRINGWOOD SHORTHORNS

Young stock for sale, sired by ROYAL CHIEF. He by Imported. Royal Stamp. Champion of Ohio 1904. POLAND CHINA pigs sired by Coler's Perfection.

Write your wants. WM. T. THRASHER, Springwood, Va.

Jacks, Jennets and Mules.

A fine lot of Kentucky bred and big black Spanish Jacks and Jennets. Also mules, match teams, one to six years old. Write or see me before you buy. Come to Kentucky if you want a good Jack. KENTUCKY JACK

FARM, JOE E. WRIGHT, Junction City, Ky.

ARTESIAN WELL**Contractors.**

DEEP WELL DRILLING a specialty. Estimates made free of charge in all localities. If you want any work done write M. S. SCHAILL, Michaux, Va.

A COMMON DUTY.

Every man, woman and child in the United States is interested in the question of improved highways. The failure of a hundred years of local systems has shown that the country can never have a system of good roads except by the aid and co-operation of the general government. Bills were introduced in the last two Congresses providing for this very thing—the original bill in the House of Representatives by Hon. W. P. Brownlow, of Tennessee, followed by a similar bill in the Senate by Hon. A. C. Latimer, of South Carolina; the first a Republican and the latter a Democrat. The Brownlow-Latimer bills will be introduced again this coming winter, and the strongest effort will be made to enact them into law. The friends of good roads have a duty to perform just here and now, and we would address this not alone to the farmer, but to the merchant, manufacturer, lawyer, doctor, mechanic, and all other citizens, not omitting the minister. Use your influence with your Senator and Representative. This is the only way to get this national legislation. Write them personal letters. Where you can, talk to them. Let them understand that you know what you want. You must convince them by overwhelming demand, just as the dairy interests convinced them in behalf of the pure butter law; just as every interest that secures desired legislation convinces them. Every argument is in favor of national aid to good roads. The question of constitutionality has been settled. The question of necessity has never been disputed. The existence of reciprocal obligation between the government and the people has never been an open one. The government belongs to the people. The money that gets into the treasury belongs to the people. The time has come for the people to make concerted demand for the return to them of some part of that which is their own. Good roads would do more for the country than any other one thing that can be named. It is a fact of history that no country ever built good roads without the aid of the general government. No country ever will, because the local property simply cannot afford it, and never in all the history of the world has it been able to except in the centres of wealth. If the people want good roads, they must wake up and get to work. Don't wait for somebody else to start. Get your demand in on your own Representative and Senators. If all who favor the Brownlow-Latimer good roads bills will do this, favorable action may be expected. Without this concert of action, Congress will do nothing. Brownlow and Latimer can't do the work alone. It is the common duty of the people to flood Representatives and Senators with letters, demanding this good roads legislation.

Mention THE SOUTHERN PLANTER in writing

ECHO FARM POULTRY

After the fight, we celebrate the victory or count the loss. Nearly all my customers are celebrating. Here is a sample:

Tarboro, N. C., June 12, 1905.

Dear Sir,—I set 101 of the eggs you sent me, five being broken. I had one broken in nest, which left me 96. I had 88 of these to hatch, but had two chicks killed in nest, which left me 86—one of these being late to hatch and weak, which died third day. I have lost one more, which leaves me 84 now, which are as pretty as I have ever seen. They are strong and active, and I hope to raise most of them. Very respectfully,

C. M. THIGPEN.

CAL. HUSSELMAN, R. F. D. 6, Richmond, Va.

HOLLYBROOK FARM.**Barred Plymouth Rock, EGGS FOR SITTING.**

\$1 per 15 eggs packed and delivered to express company. For prolific laying and general utility our Barred Plymouth Rocks are not surpassed anywhere. We can also supply eggs for sitting from WHITE or SILVER LACED WYANDOTTES at \$1.50 per sitting of 15 eggs. Address orders HOLLYBROOK FARM, P. O. Box 330, Richmond, Va.

Richmond's Best Breeds

won at Hagerstown, Richmond and Atlanta. Eggs from prize winning

WHITE, BUFF and BROWN LEGHORNS, WHITE and BLACK MINORCAS, B. P. ROCKS.

FLYING HOMER PIGEONS,

each variety raised by a SPECIALTY BREEDER on his own yard. C. G. M. FINK, R. F. D. 2, Richmond, Va., representing Richmond breeders.

Eggs=Eggs=Eggs!

Just to advertise our stock we offer 15 of our famous B. F. Rock eggs from Bradley prize stock for \$2.00, (worth \$6.00). Also 15 S. C. B. Leghorn eggs for \$1.50. Bred for utility and beauty. Strawberry Hill Poultry Yards, Box 287. - - - Richmond, Va.

LOUHOFF'S

White Wyandottes, White and Brown Leghorns, Barred Plymouth Rocks.

Young and old stock for sale.

PIEDMONT HEIGHTS FARM, Vancay Mills, Va.

SOME FINE**Barred Plymouth Rock**

hens for sale; also eggs for hatching, \$1 per sitting of 15. TOPLAND POULTRY FARM, Blacksburg, Va.

THE TORRENS SYSTEM OF LAND REGISTRATION.

By Eugene C. Massie.

The real estate of Virginia is assessed at 343 3/4 millions, or nearly three times as much as all the personal property returned for taxation in the State.

You can sell your personal property or borrow money on it quickly and at little expense. You don't have to employ a lawyer to examine the title to your horse or cow, nor to your oats and hay, nor to your stocks and bonds.

If you try to sell your land or borrow money on it, the first question is: Have you got a good title?

No one will buy or lend you money without being satisfied about your title. It must be examined by a lawyer, and you have to pay the bill.

It doesn't matter how often the title has been examined before, it has to be re-examined every time a new deal is made.

The same old records are examined over and over again, and every time you have to pay the bill.

It takes days or weeks to make the examination, and so many difficulties are encountered that business men frequently haven't time to bother with a transaction involving so many problems.

All this makes land hard and slow to handle.

The Torrens System will convert your lands into a quick asset and make them available as a source of commercial credit. It operates in the following manner:

1. A title is examined once officially, and confirmed by order of court. That ends the matter.

2. You are then given a certificate of title, which guarantees to all the world that you have such title as is set forth therein to the lands therein described—for example, a life estate, or a fee simple, in whole or in part, free from encumbrances or subject to such encumbrances as are mentioned in the certificate.

3. You can deal with this certificate of title almost as freely as with a certificate of stock; because everybody can see from the certificate exactly what your title is.

This will put your real estate on a footing with your personality, and will add millions to the business capital of Virginia.

The Torrens act will help the farmers and everybody who owns real estate in the country, as well as in the city.

It will kill the business of the land grabber in Virginia.

It will enable the State to collect its taxes promptly, and no man's land, when registered, can be sold for delinquent taxes without his knowledge.

It will help everybody who deals in real estate.

It will lessen the cost of transactions in real estate, stimulate and enlarge the market, and thus increase values; and when a poor man buys a home he will get a good title to it, and no one can take it away from him.

Va. Polytechnic Institute

[State Agricultural and Mechanical College]
AT BLACKSBURG, VA.

A Southern Institute of Technology.

Fifty-four instructors, thoroughly equipped Shops, Laboratories and Infirmarys. Farm of eleven hundred acres. Steam-heating and electric lights in dormitories. Degree courses in Agriculture, Horticulture, Civil, Mechanical and Electrical Engineering, Applied Chemistry, Applied Geology, and General Science. Shorter courses in Practical Agriculture and Practical Mechanics.

Total cost of session of nine months, including tuition and other fees, board, washing, text-books, uniform, medical attendance, etc., \$240.00. Cost to State students, \$200.00. For catalogue and other information, apply to J. M. McBRIDE, Ph. D., LL. D., Pres.

Orchilla Guano

A permanent improver for

Grain and Grass.

Swift's Bone Meal and Blood

Swift's Bone Meal

Swift's Dissolved Animal Bone

DIGGS & BEADLES, Inc.,
SEEDSMEN

Richmond, - Virginia.

Bargain Sale

4,000 BREEDING BIRDS to offer. 40 VARIETIES BEST POULTRY. Large illustrated book, 6c. List free. Get prices, save money.

JOHN E. HEATWOLE,
Box L, Harrisonburg, Va.

EGGS FOR HATCHING.

\$1 for 15. Black Minorcas, Black Langshans, Barred and White Rocks, Light Brahmas, S. L. Wyandottes, S. C. W. Leghorns, S. and R. C. B. Leghorns. A few more S. L. Wyandotte cockerels for sale, \$1 each. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

SINGLE COMB
BROWN LEGHORN

Eggs for sale; 15 for 75c., 30 for \$1.25. Send us your order and get a good stock of chickens. We give satisfaction. Prompt shipment.

Stock for sale after August.

"The Manager of Meherri's Poultry Farm is well known to me, and is thoroughly reliable"—S. B. Coggin, Agt. So. Ex. Co. MEHERRIN POULTRY FARM, Branchville, Va.

Registered Jersey Bull

from high testing stock for sale. Very handsome and has many dairy points; dam tested 13 pounds butter in 7 days; grand dam tested 17 1/2 pounds same time. EVERGREEN FARMS, W. B. GATES, Prop., Rice Depot, Va.

BERKSHIRES

LORD PREMIER, PREMIER LONGFELLOW, GOV. LEE and JACK OF ALL TRADES strains. BEST ENGLISH and AMERICAN blood. Pigs at prices you can afford to pay. BOYD C. FUGATE & BRO., Fugate's Hill, Russell county, Va.

Experienced Farm Manager

wants position. Understands handling labor, improved implements, etc. Nine years at last place. Best reference. Address 609 I street, N. E., Washington, D. C.

In writing mention Southern Planter

GREAT CLUB OFFER.

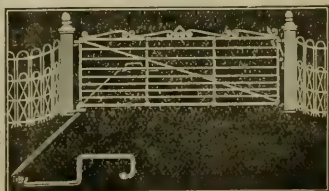
THE WEEKLY TIMES-DISPATCH, THE SOUTHERN PLANTER, THE WOMAN'S MAGAZINE, all three, 1 year, \$1.00.

This offer holds good for the month of JULY only; new or renewals. Address THE TIMES-DISPATCH, Richmond, Va.

MANLOVE SELF-OPENING GATE

ALWAYS IN ORDER.

In general use many years. Is guaranteed to work and give satisfaction, all sales made on that basis. It saves time and annoyance. Adds to value, and good appearance of a home and is a good advertisement for any up-to-date prosperous place. Catalogue, MANLOVE GATE CO., 272 Huron street, Chicago, Ill.



ALFALFA

The Most Useful and Profitable Crop you can grow. The best time to sow (in the South) is from August 15th to September 15th.

Prepare your Ground carefully and to insure a stand use

ALFALFA BACTERIA INFECTED SOIL

as recommended by the Agricultural Experiment Stations.

You can obtain enough of this infected soil to inoculate ONE ACRE OF GROUND FOR \$1.00 per bag (about 2 bushels) F. O. B. EWELL FARM.

Send in your orders now and shipment will be made when you are ready. Address
EWELL FARM, Spring Hill, Maury Co., Tenn.

It will invite development of the whole State by settling titles. And it will invite immigration, because strangers will not hesitate to buy such guaranteed titles.

The Torrens System is no experiment. It has been tested in Australia since 1858, and is in operation in London and other portions of England and many of its provinces, including portions of Canada.

It has also been adopted in Illinois, California, Massachusetts, Minnesota, Oregon, Colorado, the Philippines and Hawaii. And Iowa, Michigan, Rhode Island, Wisconsin, Georgia, Kentucky, Maine, Missouri, New York, North Dakota, Pennsylvania, Tennessee, Texas, Washington and West Virginia are considering it, and taking steps for its adoption.

If Virginia wishes to keep up with the march of progress, she must do justice to her land owners. The spirit of our land laws is the spirit of mediæval oppression and restriction. We are living under a superannuated system, originated by Norman lawyers under William the Conqueror, and venerable only as an antique relic of a past age. Feudal methods are not suited to this age. Laws made when lands were held under royal grants and sold for ten cents an acre are not suited to the business methods and commercial requirements of this day and generation.

See that every candidate for your vote is in favor of the Torrens System. Support no one who opposes it.

It is entirely voluntary, not compulsory. It simply gives you an opportunity to register your lands if you should see fit to do so.

There is no valid reason why any one should object.

Section 100 of our new Constitution especially authorizes the Legislature to adopt the Torrens System in Virginia.

It has been approved by the Virginia State Bar Association, the Bar Association of the city of Richmond, the Virginia Bankers' Association, the Virginia Board of Trade, the Virginia Real Estate Association, and the Chamber of Commerce of the city of Richmond.

It is supported by the Times-Dis-

LARGE YORKSHIRES.

The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times.

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

Address **BOWMONT FARMS, Salem, Va.**

RED POLLS For Sale

One registered bull. Four Cows, served, 5 years old. Four yearling heifers: the cows and yearlings are high grades, from best English Stock, from $\frac{3}{4}$ to $\frac{1}{2}$ to pure-bred. Will sell at a low price.

Several yearling GUERNSEY BULLS, JERSEY HEIFERS and CALVES.

BERKSHIRE boars ready for service, Sows in pig and pigs, pairs and trios, not akin.

M. B. ROWE & CO., Fredericksburg, Va.



Suffolk Sheep

Young REGI-TERED EWES and a few BUCK LAMBS for sale, at reasonable prices.

I commenced 5 years ago with a few imported ewes and have never before offered any ewes.

I shipped a car of half-bred Suffolk Lambs to New York, June 3rd, averaging 90 lbs. and they topped the market. K. E. HARMAN, Pulaski, Va.

EDGEWOOD STOCK FARM.

❖❖ DORSETS. ❖❖

Our FALL LAMBS are here, friends, and they are crackerjacks. Our Imported Ewes started lambing October 15th. Better give us your orders now. Last year many of you were too late.

J. D. and H. B. ARBUCKLE, Maxwellton, Greenbrier, Co., W. Va.



WOODSIDE BERKSHIRES

EVERYTHING SHIPPED ON APPROVAL

We are now offering some very choice pigs, sired by my two great
TER LEE OF BILTMORE, No. 79379, and out of sows weighing



boars, LUSTRE'S CARLISLE OF BILTMORE, No. 79057, and MAS-
from 500 to 600 pounds each, in only fair breeding condition. Lustre's
Carlisle is just two years old, weighs 680 pounds, and is as active as
a six months old pig. He is sired by Royal Carlisle, No. 8313, dam
Topper's Lustre, No. 5423. We believe that Master Lee when fully
matured will weigh close to 1,000 pounds; he is sired by Loyal Lee,
2d, of Biltmore, No. 56632, dam Imported Danesfield Mistress, No.
76327. Loyal Lee, 2d, is undoubtedly the champion Berkshire boar of
the world, having more prizes to his credit than any other boar
living or dead. Danesfield Mistress is a daughter of Danesfield
Huntress, No. 68178, who has an unbroken record of first prize at all
the leading English shows, with one exception, and then being de-
feated by her daughter, Danesfield Mistress. Our price for strictly
choice pigs from 2 to 3 months old is \$10.00 each f. o. b. Charlottes-
ville, Va. To show our confidence in what we offer and insure satis-
faction to our customers, we will ship pigs ON APPROVAL, and if
they are not entirely satisfactory in every respect, you can return
them. In other words, you need not pay for pigs until after you see
them. For full particulars, address WOODSIDE STOCK FARM, R. S.
FARISH, Prop., Charlottesville, Va.

patch and the News Leader of Rich-
mond, the Landmark, and the Vir-
ginian-Pilot, of Norfolk; the Peters-
burg Index-Appeal, the Fredericksburg
Star, the Charlottesville Daily Pro-
gress, the Staunton Daily News, the
Harrisonburg Spirit of the Valley, the
Virginia Law Register, and other in-
fluential papers throughout the State.

WASHINGTON NOTES.

"I would not give a snap of my fin-
ger for the education you cannot ap-
ply," said Secretary of Agriculture
Wilson the other day, in addressing
the graduates of the McKinley Manual
Training School at Washington.

"But how do you expect a farmer to
address a meeting like this," said Mr.
Wilson. "I am nothing but a plain
hayseed." The Secretary declared that
the United States owes her place in
the congress of nations largely to her
common school system, but he advo-
cated the advancement and improve-
ment of that system. "My sympathy,"
he said, "is with the people who have
to work with their hands in this work-
a-day world of ours. The Scriptures
say if you do not work you shall not
eat, and that is right. We want to
educate our farmers to run the farm,
not to live away from the farm. We
want to train the farmer's boys to
work the farm, and not for the pro-
fessions where nobody wants them."

Altogether the most useful farm pub-
lications of the government are the
farmers' bulletins of the Agricultural
Department, entitled "Experiment Sta-
tion Work," which are issued eight or
ten times a year. As heretofore sug-
gested, a better name would be "Prac-
tical Farm Experiments" for the bul-
letins usually consist of from eight to
a dozen concise articles of from one
to three pages, giving accounts of the
results of practical government farm
experiments. The present title is apt
to confuse the publication with the
"Experiment Station Record." The
bulletin covering the practical
farm experiments is intelligently
edited and boiled down, and
scarcely an issue of it but will con-

Baron Premier 3rd 75021,



the head of our herd, was first in his class at World's Fair; weighs 900
pounds at 22 months. His dam is litter-mate to Lord Premier, 50001,
selling recently for \$1,500; his sire was premier champion winner at World's
Fair at St. Louis. With this great hog and a large line of both Imported
and American well selected sows and gilts, especially chosen to mate with
him, we are actually producing and accomplishing the pleasure of breeding
the most magnificent strains of BIG, LONG, WIDE, DEEP, THICK-SET
BERKSHIRE HOGS on short legs.

We are now offering, a few bred sows and gilts and some three months
pigs. It makes no difference how fine hogs you desire to purchase, you
need not go farther than

MAPLE SHADE FARM,

W. H. COFFMAN, Propr. Bluefield, W. Va.

BERKSHIRES FOR SALE

One litter, 12 pigs out of IMPORTED RUDDINGTON DINAH
68324, a superb sow.

One litter 10 pigs out of Lady Longfellow of Forest Home 72587.
An unusually prolific sow whose pigs always grow marvelously.

One show sow pig; One show gilt, bred.

A few Boars and some Boar Pigs.

FOREST HOME FARM, Purcellville, Va.

For Month of July Only



I will sell cheap, a bunch of handsome bred
gilts. Imported blood on both sides; several
mature bred sows; 5 ready for service boars;
a surplus of handsome 8 to 14 weeks pigs.
SAFE DELIVERY GUARANTEED. Stock
returned at my expense, one way, if not sat-
isfactory.

25 per cent. off for July Purchases

One Pekin Drake and 4 ducks left. The

stock for \$5, less 25 per cent., \$4.

THOS. S. WHITE, Fassifern Stock and Poultry Farm, Lexington, Va.

POLAND=CHINAS.

A few crack-a-jack pigs for sale by my fine boar GREAT BIG TECUMSEH 62301 and out of SUNSHINE and TECUMSEH SOWS which I bought from the best berds of Ohio. Great Big Tecumseh 62301 was bred by J. J. Snyder of Ohio and weighed over 500 pounds at 14 months old.

Also a few good sows for sale, bred to a half brother of the senior champion boar at the St. Louis World's Fair. This boar was bred by Winn and Mastar of Kansas I don't believe there is a better bred herd of Poland-Chinas anywhere than mine, and their individuality is so good I ship subject to return at my expense if not satisfactory.

CHOICE SHROPSHIRE RAMS out of registered ewes and by a ram from the Niagara Stock Farm, New York. Prices low, testimonials and references furnished. My motto "return at my expense if not satisfactory."

J. F. DURRETTE, Birdwood, Albemarle Co., Va.

tain something of interest to every farmer in the country. One of these is just ready for distribution by the Department (Farmers' Bulletin No. 225), and contains articles covering the following, the whole thing included in thirty pages:

Experiments with Turkeys, Influence of Feeds on Milk, Mineral Matter for Chickens, Brooder House, Potato Culture, Protecting Cows from Flies, Tomato Growing, Cowpea Seed, Tobacco Seed, Buying and Judging Seed Corn, Treating Seed Oats for Smut, Swelling in Canned Peas, American Caneberry Cheese, Flint Varieties of Corn, Injury by Smoke and Gases, Fertilizer Mixtures.

LOCUST DEVASTATION.

Many newspapers, in their endeavor to give their readers articles of startling character, seize upon every opportunity to stretch the truth to meet this end. We are now having reports from Indiana, which describe the situation there among the farmers as something most alarming, as the seventeen-year locust has made its appearance, and is causing "untold damage to the orchards and crops." According to the Department of Agriculture, the damage caused by the seventeen-year or thirteen-year or any other species of cicada is not sufficient to cause the farmer any uneasiness when he knows the insect is coming. There is some little trouble with the pest in young orchards, but among older trees the damage amounts to hardly anything else than a pruning of the young wood, this caused by the female ovipositing in the twigs. To the vegetable or fruit crops the cicada does no harm. Anyway, the insect is among the land of the living but a short time—scarcely three weeks, nearly all of which time is spent in the tree tops until the female lays her eggs in the twigs and then dies. The eggs when they are hatched out bring a host of tiny, harmless red ant-like beings, which run along the branches to the end and drop off on the ground, speedily boring their way into the ground, there to remain in the pupal state for seventeen or thirteen years, according to the peculiar species to which they belong. Notwithstanding the frequent denials by Dr. L. O. Howard, the Government

POLAND CHINA AND Tamworth Pigs

entitled to registration; also bred sows at reasonable prices.

APPLY TO J. C. GRAVES, Barboursville, Orange Co., Va.

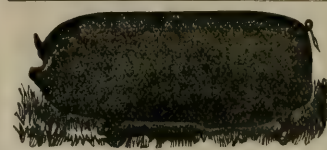
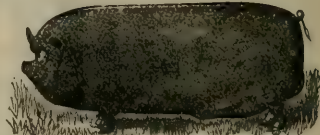


Large English Berkshires

ROYALLY BRED PIGS for sale. April farrow. Some young boars ready for service. BILTMORE BLOOD. PRICES REASONABLE. C. S. TOWNLEY, Red Hill, Va.

LARGE English Berkshire Pigs

of the BEST BLOOD, three months old, properly fed and well developed, for sale at farmers' prices, if sold at once. Only the very choice of each litter will be sold for breeding purposes. Also offer young boar ready for service. PHIL. H. GOLD, Winchester, Va.



Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.

THE - OAKS - STOCK - FARM.

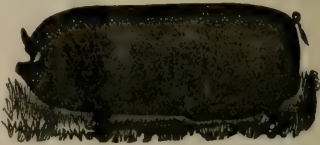
A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

We breed and ship the FINEST STRAINS of

Large ENGLISH BERKSHIRES

for less money than any firm in the South, quality considered. Every pig shipped possesses individual merit. Pedigree furnished with all stock. 200 Gallons Cider Vinegar.

ALEX. HARMAN, Mgr., Lexington, Va.



HERE IS A SPECIAL SALE

KING DARE REGISTERED SADDLE STALLION, 4 years old, 16 hands high, weighs 1,100 pounds; a show horse and a great breeder. Eight REGISTERED ABERDEEN ANGUS cows, yearling heifers, bulls and calves, by the great show bull, Beau Blackbird.

POLAND CHINA PIGS, FOX HOUNDS, FOX TERRIERS, SCOTCH COLLIES and BEAGLE HOUNDS. S. C. B. LEGHORN eggs, \$0 \$1.00; \$3.25 per 100. J. D. STODGHILL, Shelbyville, Ky.

CASH

FOR BOYS, GIRLS, MEN, WOMEN.

- \$75 Cash** For any boy or girl under 18 years of age raising the largest calf to six months of age.
- \$75 Cash** For any boy or girl under 18 years of age raising the largest colts to six months of age.
- \$25 Cash** For any boy or girl under 18 years of age raising the largest pig to six months of age.
- \$50 Cash** For any woman reporting largest amount of matter from one cow for any 90 days.
- \$25 Cash** For any woman reporting the largest amount of milk from one cow for any 90 days.
- \$50 Cash** For any man or woman reporting largest amount of milk from five cows for any 90 days.
- \$50 Cash** For any man, woman or boy raising the largest number of pigs from 5 sows to four months of age.
- \$25 Cash** For any man, woman or boy raising the largest number of pigs from one sow to two months of age.
- \$25 Cash** For anyone reporting largest number of pigs fattened by one sow, dead and alive counted.
- \$125 Cash** For anyone showing largest gain for one steer for any 90 days.
- \$25 Cash** For anyone showing largest gain for two steers for any 90 days.
- \$125 Cash** For anyone showing largest gain for one ear load of hogs for any 90 days.
- \$25 Cash** For anyone showing largest gain for ten hogs for any 90 days.
- \$25 Cash** For anyone raising the largest hog to six months of age.
- \$25 Cash** For anyone showing the greatest gain for one hog for any 90 days.
- \$25 Cash** For anyone reporting smallest amount of grain used for a team working every day for any 60 days.

- \$25 Cash** For anyone reporting the largest gain for one mule in any 60 days.
- \$25 Cash** For anyone reporting the largest gain for a horse or mare in any 60 days.
- \$50 Cash** For anyone reporting the largest gain for 25 sheep for any 90 days.
- \$25 Cash** For anyone reporting the largest wool clip from five sheep.
- \$25 Cash** For anyone reporting the largest gain in ten sheep for any 90 days.
- \$25 Cash** For anyone reporting the largest gain for five goats for any 90 days.
- \$25 Cash** For anyone reporting the largest wool clip from five goats.
- \$25 Cash** For anyone reporting largest number of Best prizes won in 1905 for one time.

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"International Stock Food" is sold by over One Hundred Thousand Dealers on a "Spot Cash Guarantee" that the use of one ton will make you \$500.00 net profit over its cost, or that one hundred pounds will make you \$18.00 net profit. If it ever fails your money will be promptly refunded. "International Stock Food" is prepared from powdered, medicinal roots, herbs, seeds and berries and is equally good for horses, cattle, sheep, goats, hogs, colts, calves, lambs or pigs. It is fed in small amounts mixed with grain and purifies the blood, tones up and strengthens the system and greatly aids digestion and assimilation so that each animal obtains more nutrition from all grain eaten. It will always make you more money than you can possibly make without its use. It also cures and prevents many forms of disease and is absolutely harmless even if taken into the human system. In addition to the use of "International Stock Food" making you a large extra profit with your stock we offer \$100 in cash premiums as an incentive for you to get the "Farm Paper" and a little extra. "International Stock Food" is endorsed by over Two Million Farmers who have been constant users for over fifteen years. The Editor of your "Farm Paper" will tell you that we always do exactly as we agree.

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We do not ask you to send us a cent. Our offer is open to the world on very easy conditions stated below list of cash prizes. The premiums are perfectly free and are open to any man, woman or child. You can compete for one or more, and if successful you may earn several hundred dollars in cash.

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Entomologist, that the seventeen-year or thirteen-year locust, which are not locusts, but cicada, do no harm, the newspapers persistently bring out scare headlines dwelling on the devastation caused by the insect.

WEATHER FAKES.

The United States Weather Bureau takes no stock in the monthly and seasonal forecasts by the so-called "weather prophets," whose predictions are based upon signs of the moon, conjunctions of planets, and other astronomical phenomenon which, as far as scientific men can learn, have no appreciable influence upon our atmosphere. Frequently, of course, they hit a snow storm or cold wave in winter and thunder and wind storms in the summer as all are liable to occur in their respective seasons but to predict the nature of the weather more than three days is not possible by the national weather bureau even with constant connection with hundreds of observing stations in all parts of the continent. All forecasts sent out by the Weather Bureau are based upon actual conditions at the time, but the unexpected often

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happens to upset what seems likely to occur.

LOSS BY FOREST FIRES.

It is estimated that the yearly loss to the country by forest fires is above \$25,000,000. A large part of this destruction is due to carelessness and wantonness. In most of the European countries the forests are carefully guarded and law is strictly enforced against offenders. In this country the national government finds it hard work to look after its own reservations, while in the State there is generally but little conception of the value of forests, and accordingly a corresponding indifference in the matter of protecting them. The American press must be the factor which will arouse public opinion to the importance of forest protection.

THE FLAX CROP IN THE UNITED STATES.

The flax crop certainly is one of the curiosities of agriculture, said Mr. Moses Falsom, of St. Paul, in talking with me of this important crop of the Northwest; and other sections. Flax is migratory, its cultivation beginning on the Atlantic coast. It was originally produced for its fiber, but the invention of the cotton gin checked its growth for that purpose. Then its cultivation for seed began, and has continued until the United States leads the world, with the centre of production in States of the upper Mississippi country. The flax plant is the source of two extremely valuable economic products: fiber, noted from time immemorial for strength, fineness and beauty, and a seed rich in oil valuable in many ways. Its production for both purposes at once has never been successfully carried on. For fiber, from two to four bushels are sowed to the acre, and the plant is pulled before the seed is ripe; for seed, from two to three pecks will suffice per acre, but the straw is too coarse to be used, so as a commercial proposition it must be raised either for seed or for fiber. In Europe it is grown principally for fiber, but in this country for oil, and singular to say, that very little oil is produced in States where the seed is grown, except Minnesota. Of the single by-product of the linseed oil mills, oil cake, a valuable cattle food, more than 80 per cent., or 600,000,000 pounds, is shipped abroad and converted into milk and beef upon the dairy and stock farms of northern Europe. This in connection with our shipments abroad of thousands of tons of cotton seed meal constitutes one of our greatest agricultural follies. It is identical with the occasional practice of a farmer selling his manure pile.

The "coreless, seedless, blossomless" apple is not a new thing by any means. It is comparatively valueless freak, and has been known to horticulturists since the days of Pliny, the Roman naturalist, who wrote about it in the first century of the Christian era. A promoter exploited it consider-



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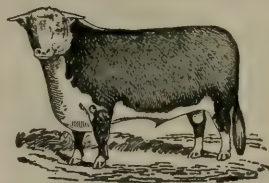
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ably about fifteen years ago, and was exposed by Professor Bailey. Wise ones will await reports and tests by the State Experiment Stations before buying stock in the so-called "Spencer seedless apple," now being adroitly advertised, and if they wait they will never buy the stock.

GUY E. MITCHELL.

SOUTHERN POETS—ARTICLE VI.

Mary Washington.

John R. Thompson was one of the best literary editors and critics of the South, and moreover, he was a fine poet and accomplished scholar. He was born in Richmond, Va., in October, 1823. His earlier education was received at East Haven, Conn., but he took a later course at the University of Virginia, where he graduated in his 22d year. After two years reading, he returned to the University and took the degree of Bachelor of Law, in 1845. For fifteen years preceding the Civil War he was editor of the Southern Literary Messenger, and his critiques, book notices and essays on literary subjects were all able, just and generous, more inclined to praise than to blame, though his praise was very discriminating. During this period he produced several poems for special occasions and essays in verse, delivered in public, "Patriotism," "Virginia" (1856), and "The Greek Slave." On the inauguration of the Washington statute in Richmond Feb. 22, 1853, Thompson delivered a fine ode of his own composition, though I imagine that the sleet which pelted the audience on that occasion prevented their catching the drift of the orator's meaning, or appreciating the fineness of his verse. It appeared, however, next morning in the columns of the Richmond papers, and then people could enjoy it in comfort and at their leisure.

Mr. Thompson also wrote an essay in verse, called "Poesy," in which he paid a tribute to various Southern poets. He likewise wrote numerous lyrical and other smaller poems, and various contributions to first class periodicals, both North and South. As a poet, he was distinguished for polish, correct taste, and timeliness, though his genius was somewhat trammelled by his writing so much for special occasions.

During the war he wrote several poems of unusual excellence, as, for instance, "The Battle Rainbow," written just after the seven days of battle before Richmond, in 1862, and based on

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the fact that in the eve preceding this "long week of glory and agony," a magnificent rainbow, after a severe storm, overspread the eastern sky, exactly defining the position of the Confederate army as seen from the capitol at Richmond. His poem on Stuart was also very fine, and likewise the one on Ashby.

Thompson was very successful as a lecturer. His immense fund of information and the readily adaptive quality of his mind fitted him well for this vocation. The writer has a pleasant recollection of having heard him deliver a deeply interesting lecture on the life and character of Edgar Poe at the Y. M. C. A., in Richmond, during the war. His intimate personal acquaintance with Poe, and his friendly allowance for the eccentricities of the poet, made him a very suitable exponent of the latter's life and character.

Mr. Thompson was editor of "The Record," a short-lived, bold Confederate weekly, published in Richmond in 1863. He was also correspondent of "The Index," the Confederate organ in London as long as that paper existed.

In 1864, his health having failed, he travelled in Europe. After the war he remained a year or two in London, connected with the "London Herald," and a contributor to Cornhill Magazine and Blackwood, his talents and scholarship being highly appreciated in England. He afterwards settled in New York and engaged on the staff of "The Evening Post."

LAMAR FONTAINE.

After much controversy on the subject, it seems to be pretty well settled now that Lamar Fontaine was the author of "All quiet along the Potomac, to-night." The authorship of this poem was claimed by six persons, some Northern and some Southern, but Mr. Fontaine seems to have substantiated his claims better than any of the other contestants.

Replying to a letter of inquiry on the subject from Mr. J. W. Davidson, author and compiler of the volume on "Living Southern Authors" (1869), Mr. Fontaine writes as follows:

"The poem in question was written by me while our army lay at Fairfax C. H., or rather the greater part in or around that place, on the 2d of August, 1861. I first read it to a few of my mess-mates, Company I, Second Virginia Cavalry. During the month of August I gave away many manuscript copies to soldiers and to some few ladies, in and about Leesburg, Loudoun county, Va. In fact, I think that most of the men belonging to the Second Virginia Cavalry (then commanded by Col. Radford) were aware of the fact that I was the author of it. I never saw the piece in print till just before the battle of Leesburg, October 21, 1861, and then it was in a Northern paper, with the notice that it had been found on the dead body of a picket."

"I was born on the wild prairies of this State (Texas) near Independence, Washington county, the place now



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called Gay Hill. In 1840 my father moved to Austin, and was private secretary to General Lamar, after whom I was named. * * * My friends have often urged me to collect my poems and publish them, and at our home I had several hundred pages prepared, but they were destroyed by those who made wreck of our land, and I have never had time or means to collect them since."

"All quiet along the Potomac to-night" first appeared, according to some authorities, in Harper's Weekly, November 30, 1861, bearing the title of "The Picket Guard," and credited to a woman. It is so far superior to any other poem that has appeared under Mr. Lamar Fontaine's name that this circumstance has been used to throw doubt on the validity of his claim.

James Maurice Thompson, of Georgia, is one of the numerous instances of a man's combining the profession of law with literary pursuits, at least, he did so at the outset of his career, practicing law in Calhoun, Ga., though I do not know whether he kept this up, after his literary work became more strenuous. Although he is now known chiefly as a novelist, and more especially as the author of "Alice of Old Vincennes," still in his early literary career he took his most distinctive position as a poet. He showed great versatility, writing poems, translations, criticisms, sketches, tales and essays. In his poetical works he addressed himself to a small, select audience, hence he was not so widely read, nor so generally popular as a poet as he has become since then as a novelist. Amongst his poems is "An Allegory," a fine but somewhat obscure poem, of which the majority of people would probably say that they could not see what it was all about. "Twilight" is generally considered one of his best poems.

Thompson is very fond of speculative philosophy, being devoted to Leibnitz and his school. His speculative genius is peculiarly introspective. He is a fine scholar, well versed in ancient classics, and understanding five languages, ancient and modern. His practical vein shows plainly in his beautiful prose work, "My Winter Garden," in which he describes, as only a person of true poetical feeling could do, his winter home on the Gulf of Mexico, with all the wonders and beauties that nature spreads out in that favored locality. Mr. Thompson was a Confederate officer in the Civil War.

Dr. F. O. Ticknor, of Columbus, Ga., has written extensively (mostly poems) for Southern periodicals. The following is his best known poem: "VIRGINIANS OF THE VALLEY."

The knightliest of the knightly race,
Who since the days of old
Have kept the lamp of chivalry,
Alight in hearts of gold.

The kindest of the kindly band,
Who rarely hoping ease,
Yet rode with Spotswood round the land,
And Raleigh round the seas.



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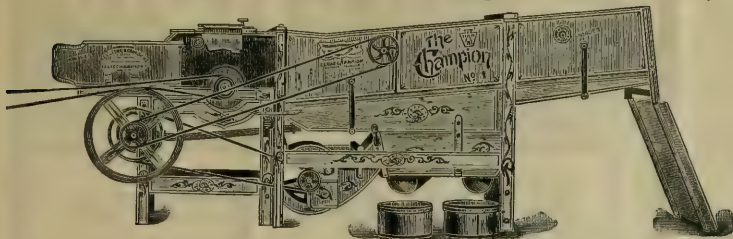
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Who climbed the blue Virginian hills,
Against embattled foes
And planted there, in valleys fair,
The lily and the rose;
Whose fragrance lives in many lands,
Whose beauty stars the earth,
And lights the hearts of many homes
With loveliness and worth.

We thought they slept—the sons who
kept

The names of noble sires;
And slumbered while the darkness
crept

Around the vigil fires.
But still the golden horeshoe knights.
Their old Dominion keep,
Whose foes have found enchanted
ground,

But not a knight asleep.”
This reference to “the golden horeshoe knights” will doubtless remind the readers of “Audrey” of Miss Johnson’s interesting account of this expedition, undertaken by Spotswood and his companions.

GOOD HOUSEKEEPING.

FRENCH FRIED POTATOES.

Boil the Irish potatoes the day before using; when cold cut into small squares. Put a large spoon of butter into a frying pan and one onion chopped fine; fry till the onions turn a light brown; turn into the pan a quart of the potatoes, sprinkle salt and pepper over them and fry brown, using a fork to stir so as to break them up as little as possible. Served for breakfast very hot. It is always well to heat the dish they are served on.

BROILED POTATOES.

The potatoes must be boiled and cold. Cut them into slices a quarter of an inch thick and dip each slice in melted butter and cracker crumbs. Put them into a double broiler and broil slowly. Arrange on a hot dish with curled parsley or celery tops as a



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garnish. Pour a little melted butter over them and serve at once.

POTATO STRAWS.

Boil the potatoes; cream them with butter; pepper, salt and a small quantity of cream; then put them, a small quantity at a time, into a colander and mash them through on the dish in which they are to be served. Take care not to let the colander touch them. When all are mashed through, run the dish into the stove and let them brown quickly. Garnish with parsley and serve hot. This is a very pretty dish.

STUFFED TOMATOES.

There is no way of cooking tomatoes more appetizing than this, and they can often be eaten by delicate people whose digestion will have nothing to do with the raw ones. Select the medium sized tomatoes, round and smooth. Cut off the bloom end and scoop out most of the seed and meat. Arrange the shells in a biscuit pan, take the part you have scooped out and mix it with salt, pepper, a small chopped onion, bread crumbs, a small quantity of sugar, and pack it all back into the shells, a speck of butter on top of each, and place the piece you have cut off on the top. Bake for forty minutes. Slip the batter cake turner under each one and remove it to an individual saucer. Serve hot for breakfast or lunch.

TO PEEL TOMATOES.

If you have a frying basket, put the tomatoes into it and dip them into a pot of boiling water, a few at a time; let them remain three minutes; take out and the skin will slip off at once; then set them at once on the ice and let them stand till just before dinner. Slice and serve with French dressing.

SCALLOPED CAULIFLOWER.

Soak the cauliflower in clear, cold water for an hour or two; then cook it one hour in salt water. Keep it well covered all the time with the water. Take it out, drain off the water, and break apart. Put a layer of bread crumbs in the bottom of a deep pudding dish and arrange a layer of the cauliflower on it; salt, pepper a dust of red pepper, and the least grating of cheese. Now put in a thin layer of crumbs and repeat the cauliflower and seasonings. Let a layer of bread crumbs come on top and a generous supply of butter broken into pieces and put on it. Bake.

DEWBERRY CREAM.

Make a thin custard with three quarts of milk, three eggs, and three tablespoons of corn starch. Boil it well in a double boiler. When it is cold add three pints of dewberries which have been well mashed and put through a thin cloth, pressing out as much of the pulp with the juice as you can. Sweeten and freeze. Let it set for two hours after it is frozen to ripen. This is a great advantage to any fruit cream.

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the soft freestone peaches. They must be very ripe. Peel them and mash with the potato masher and put through the sifter or a fine colander. Sweeten and add the rind and juice of one lemon to each gallon. Put half peaches and half water. Dissolve half box of gelatine in a quart of the water; boil a minute and add to the whole. Freeze quickly and pack. Often you can get the over-ripe peaches in the market on a Saturday afternoon for almost nothing, and they are just what you want for this ice. It takes less sugar than any of the ices.

BLACKBERRY PRESERVES.

To each quart of the fruit allow three-fourths of a pound of sugar. Mash a few of the berries and add the sugar. Let them boil up, then add all the berries. Let them boil half hour and put at once into glass jars. Always get new rubbers for your jars; have them perfectly clean, and there will never be a spoiled jar to disappoint you in the winter.

CANNED DEWBERRIES OR BLACKBERRIES.

You can hardly have too many of these if you have a big family, for there is nothing so wholesome or that can be used in so many ways. Pick over the berries, and if you will keep them under water while you are picking them they do not stain the hands. Put them into a porcelain kettle with about two cups of water, and let them come slowly to a boil. Stir them once in a while to prevent sticking. Let them boil eight or ten minutes and fill your jars at once. Screw very tight. And after they are cold screw them again. Set them in a cool place and they will keep always.

RASPBERRY JAM.

One pound of sugar to each pound of fruit. Mash the berries thoroughly. Put them on and boil, stirring frequently twenty minutes; then add the sugar and boil ten minutes longer. Skim if necessary, and pack into your small jars. It is well never to make more than six pounds of this at one time. It should be as clear as jelly, and much better. Caraven.

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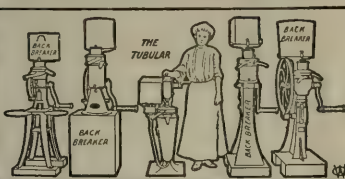
In the July issue *The Century* continues its policy of presenting reports, by experts in their different lines, of the progressive work and investigation of the world, with the first of two papers on "The Electric Railway," by Frank J. Sprague, former president of the American Institute of Electrical Engineers. Mr. Sprague's struggle through the hardships and discouragements of early experiments, and his present pre-eminence in the field of electric traction, give these articles unusual value. The number of readers interested in such first-hand history is hardly to be estimated, for the development of the trolley and other forms of electric traction is recognized as one of the most interesting and significant phenomena of our times. Altogether in a different field, yet revealing also something of the wonders of modern business life, is Melville E. Stone's account of the method of operation of the Associated Press, another of Mr. Stone's papers on the inside workings of the great American news-gathering enterprise. There is a further installment of L. Frank Tooker's vigorous novel of the sea, "Under Rocking Skies," and six short stories for leisure hours. Edna Phillips' "The Earthquake Child" is a quaint tale of peasant life in the Alps. Margherita Arlina Hamm has another of her stories of the New York Egyptian colony. "The Baby and the Camel," Philip V. Mighel's "A Nevada Samaritan" is a smile-provoking tale of a blind elephant, an unfortunate circus owner, an adoring dog, and a Western editor. Lucia Chamberlain, in "The Lap o' Land," contributes a study of Irish character. Lawrence Mott, the Harvard undergraduate who seems to have opened a new vein in fiction, has another story of "Jules of the Great Heart," laid in the Northwest Territory, where he has spent several summers; and George S. Chappell, writing out of intimate knowledge of art student life in Paris, has set down some amusing incidents in the existence of one Gilbert, "A Hard Worker."

Of course, there is a patriotic tone to the July St. Nicholas, with Fourth of July stories holding prominent place. First of all, is Dorothy Brooks' "How Teddy Saw the King," the tale of a homesick little American's Independence Day. This month's Pinkney Perkins' story tells how Pinky celebrated the glorious Fourth—but not just in the way he and his chum had planned. "When Dick Went to the Race" is a pretty story of one of the Yale-Harvard regattas. And Margaret Johnson's "The Corner Cupboard" is a delightful record of two young artists' summer. Margaret Watson tells an interesting incident of bird life in "The Swallows' Revenge." For younger readers is the first of Isabel Gordon Curtis' "Chuckie Wuckie" stories, the dear little story of a dear little girl. Not fiction, but quite as fascinating as any story, William Lovell Finley tells

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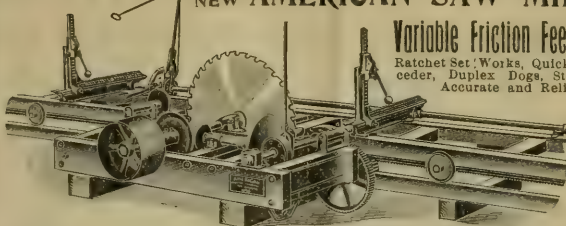
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of his interesting experiences "Photographing a Flicker Family"; and there is an account of "Animal Pets on Ship-board" by the late Lieutenant-Commander E. W. Sturdy, U. S. N.

The Review of Reviews has articles on the Late Gen. Maximo Gomez, Frontispiece. The Progress of the World: Record of Current Events, with cartoons and portraits. Some National and International Cartoons of the Month, International Cartoons of the Month. The Late Mrs. Mary A. Livermore: a Portrait. A Bonaparte at the Head of the American Navy, with portrait of Charles Jerome Bonaparte. John Paul Jones and Our First Triumphs on the Sea, by Charles Henry Lincoln, with portraits of John Paul Jones. For the Conquest of the Pole, by P. T. McGrath, with portrait of Robert E. Peary, U. S. N., and other illustrations. Argentina: The Wonderland of South America, by John Barrett, with portraits and other illustrations. How Niagara is "Harnessed," by Truman A. De Weese, with illustrations. Why Norway Has Separated from Sweden, by "A Danish Observer."

The novelette in Lippincott's for July is a strikingly lively and lovely summer story, called "An Orchard Princess," its author, Ralph Henry Barbour, is well remembered through his "Kitty of the Roses" and other good work. As a creator of feminine character Mr. Barbour seems to be particularly felicitous, and his heroine in "An Orchard Princess" more than justifies this opinion. She is discovered by Miles Fallon and his white bulldog, "with a tail scant two inches long," when off on a country walk, and the romance thus begun leads through lanes straight and crooked up to a satisfying end—thanks to the dog. Seumas MacManus contributes a keenly humorous Irish folk-tale called "The Wonderful Story of Terry McGowan." This title seems to fit the fantastic happenings which follow the loan of a "strapper beast" in the hope of a two-fold reward. A bright summer story of Buzzard's Bay, by Elizabeth Duer, is "The Trowers of Tragedy." It closes with an elopement under really novel conditions. "The Dragon's Discipline," by Arthur Stanley Riggs, is an extremely impressive tale of Japanese loyalty and courage on board a torpedo boat. A delicious bit of realism in the family circle by Elizabeth Robins Pennell, is called "Enrietter." It is a personal experience in England. A pathetic incident of boarding-house life in New York is told by Juliet Wilbor Tompkins, under the title of "A Lady from California." "The Heart's Charity" is a sweet and clever love-story written by Ina Brevoort Roberts, the author of "The Lifting of a Finger." There are many practical and valuable hints for amateur gardeners in Eben E. Rexford's paper on "The Garden in Summer." These suggestions are pointed at a period in mid-summer when the average gardener thinks there is not much to be done.

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REPORTS.

- U. S. Department of Agriculture, Washington, D. C. Bureau of Chemistry. Circular No. 16. Officials Charged with the Enforcement of Food Laws in the United States and Canada.
- Bureau of Forestry. Circular No. 34. Practical Results of the Cup and Gutter System of Turpentine.
- Bureau of Plant Industry. Bulletin No. 72, Part III. Extermination of Johnson Grass.
- Bureau of Plant Industry. Bulletin No. 72, Part IV. Inoculation of Soil with Nitrogen-Fixing Bacteria.
- Bureau of Plant Industry. Bulletin 75. Range Management in the State of Washington.
- Bureau of Soils. Bulletin 27. Experiments in Growing Cuban Seed Tobacco in Texas.
- Consumers' Fancies.
- Weather Bureau. Explanation of the Weather Map.
- Farmers' Bulletin No. 220. Tomatoes.
- Farmers' Bulletin No. 223. Miscellaneous Cotton Insects in Texas.
- Farmers' Bulletin No. 224. Canadian Field Pens.
- Farmers' Bulletin No. 225. Experiment Station Work. Tobacco Seed. Cow Pea Seed. Potato Culture. Experiments with Turkeys, etc.
- Colorado Experiment Station, Fort Collins, Colo. Twenty-sixth Annual Report, 1904.
- Bulletin No. 90. How Can We Maintain the Fertility of Our Colorado Soils?
- Bulletin No. 101. The Western Cricket.
- Illinois Experiment Station, Urbana, Ill. Bulletin No. 90. The Curculio and the Apple.
- Bulletin No. 100. Directions for the Breeding of Corn.
- Bulletin No. 101. Crops for the Silo. Cost of Filling.
- Kentucky Experiment Station, Lexington, Ky. Bulletin No. 119. Labels on adulterated and Imitation Foods Sold in Kentucky.
- Michigan Experiment Station, Agricultural College, Mich. Bulletin No. 224. Observations on the Influence of Nodules on the Roots Upon the Composition of Soy Beans and Cow Peas.
- New York Experiment Station, Geneva, N. Y. Bulletin No. 263. The Causes and Prevention of Mottles in Butter.
- Bulletin No. 264. Profits from Spraying Potatoes.
- Bulletin No. 266. Report of Analyses of Samples of Fertilizer Collected by the Commissioner of Agriculture.
- Virginia Weather Service, Richmond, Va. Reports for April and May, 1905.
- Agricultural Department of the West Indies, Barbadoes, W. I. West Indian Planter, Vol. VI, No. 1.

Northern Virginia

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No. 5. 110 acres, 45 acres clear, the balance in timber; 5 room house; well of water; sound fruit; small stable and corn house, partly fenced; two and one-half miles from Clifton Station; near school, church and stores. Price, \$750 per acre; one-third cash, balance to suit.

No. 6. Fine dairy farm, 46 acres, all clear and in high state of cultivation; three-fourths of a mile from Vienna; steam and electric cars; near school, church and stores; 2 room house, 2 large barns and all necessary out-buildings; 2 good wells; all kinds of fruit and berries. Price, \$6,000; terms to suit. No. 7. 100 acres, dairy farm of 102 acres in cultivation and grass; all kinds of timber; well watered; 8 room frame house, basement barn 35x50; well fenced; all necessary out-buildings; dairy farm of 102 acres; railroad station, school and mill; all kinds of fruit. Price, \$3,000; \$1,000 cash, balance to suit.

No. 8. Nice home and farm of 50 acres; 40 acres clear and in high state of cultivation; 5 room house; large, new barn; all other necessary buildings; well of water at door, spring near by, and stream through place; all kinds of fruit; 2 miles from Fairfax, school, church, stores and electric cars. Price, \$3,750, on easy terms.

No. 11. 450 acres; 350 in cultivation, balance in the timber; 9 room house; well at door, spring near by, stream through farm; 2 large barns; all other necessary buildings; also tenant house. This is a fine farm for dairy and stock, one and one-half miles from Clifton Station, on Southern Railroad; school, church and stores. Terms, \$300 per acre; one-third cash, balance to suit.

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No. 13. 300 acres; 100 cleared, balance in oak timber; 3,000 peach trees and other kinds of fruit; 5 room house; barn 30x40; all other buildings necessary; one-half mile from railroad, school, store and church. Price, \$6,000; one-half cash, balance to suit.

No. 14. 16 acres; 14 acres cleared, balance in oak timber; 60 pear, 100 peach, and 100 apple trees; stream through place; near Fairfax; stores, church, school and electric railroad. This is a fine place for a hennery or apiary. Price, \$1,200, on easy terms.

No. 15. 27 acres of fine land; suitable for subdivision. It is so near the electric railroad as one building site, in the Corporation of Fairfax. Near school, church and store. Price, \$2,700; one-third cash, balance to suit.

No. 16. 148 acres; 75 clear, balance in all kinds of timber; 3 room house, small barn,

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No. 18. 120 acres; 15 acres clear, balance in all kinds of timber; 2 room house and stable; spring and running water; partly fenced; half mile from station, school, church and store. Price, \$11 per acre; one-half cash, balance to suit.

No. 21. Very cheap farm of 100 acres; 90 cleared and in cultivation, balance in timber; 7 room house; small barn and cow shed; water in every field; good fences; all kinds of fruit; 1 mile from church, school and store; 3 miles from railroad. Price, \$1,800, terms to suit.

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No. 25. 44 acres; 38 acres clear, balance in timber; good 9 room house, with cellar; barn 30x23; large shed, corn house, hen house and carriage house, running water in every field, good spring near house. Fenced with wire and rail; in the town of Legato; near school, church, store and post-office; 3 miles from electric railroad. Price, \$2,500, terms to suit.

No. 27. 9-12 acres of fine land under high state of cultivation; 7 room house, with water, bath and sink; summer kitchen with water, bank barn 16x30; all necessary out-buildings; 300 fruit trees in full bearing. Place well fenced with wire; beautiful lawn, with abundance of shade trees and shrubbery. Price, \$4,000; \$1,000 cash, balance to suit purchaser.

No. 29. 50 acres in the corporation of Fairfax, with station of new electric railroad in centre. Price, \$4,000; terms to suit purchaser.

No. 31. Lovely home; eight acres; 10 room house; barn 36x38, and out-buildings; all kinds of fruit. This is a beautiful home, sits up well. Beautiful lawn and drive; well of water at the door, and good cellar; in the corporation of Fairfax; and near electric car depot. Price, \$7,000. If you're looking for a home see this place before you buy.

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No. 39. 37 acres; about 10 cleared, the balance in pine; 5 room house; spring near, two streams through the place; partly fenced; some apple trees; one-half mile from school and church, two and one-half miles from railroad and store. Price, \$500. Terms: \$150 cash, the balance on easy terms.

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These have been raised on Alfalfa and Clover, with skim milk, from an absolutely healthy herd, and are as well bred and as carefully selected as it is possible to put on the market. You can find in this offering anything you want; the foundation of a successful herd, sows in pig (to farrow just after September 1st, for next year's winners), sows ready to breed for next spring; young sows and boars fully weaned and started on feed, that can be shipped any distance at the minimum expense; show animals ready fitted, and a few young boars that are from some of our greatest reserved sows.

This is not a draftingsale, but includes our best, and the quality of the animals offered is so good, and backed up by so much of the best blood, that we expect this sale to even further increase the reputation of Biltmore bred stock.

Tourist Tickets from all points at one and one-third fares for round trip. Special rates at the best hotels, and a good crowd already booked. Set these two dates down now. The trip will pay you even if you don't buy, but if you once see the animals you will at least try to bid.

—APPLY—

GEO. F. WESTON, Gen. Mgr.

BILTMORE FARMS,

Biltmore, North Carolina.

CLUBBING LIST.

In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

DAILIES.

	With Alone.	S. P.
Times-Dispatch, Richmond, Va.	\$5 00	\$5 00
Times-Dispatch (without Sunday)	3 00	3 00
News-Leader, Richmond, Va.	3 00	3 00
The Post, Washington, D. C.	6 00	6 00
The Sun, Baltimore, Md.	3 00	3 40

THRICE A WEEK.

The World, New York	1 00	1 25
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WEEKLIES.

Times-Dispatch, Richmond, Va.	1 00	1 25
Central Presbyterian, Rich- mond, Va.	2 00	2 25
Religious Herald, Rich- mond, Va.	2 00	2 25
Southern Churchman, Rich- mond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	2 00	1 50
Country Gentleman	1 50	1 75
Hoard's Dairyman	1 00	1 30
Horseman	3 00	3 00

SEMI-MONTHLY.

Kimball's Dairy Farmer	1 00	75
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MONTHLIES.

The Century	4 00	4 25
St. Nicholas	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's	3 00	3 25
Frank Leslie's	1 00	1 25
Cosmopolitan	1 00	1 35
Everybody's	1 00	1 35
Munsey	1 00	1 35
The Strand	1 00	1 35
Madame	1 00	1 00
Argosy	1 00	1 25
Review of Reviews	2 50	2 75
Field and Stream	1 50	1 50
Woman's Home Companion	1 00	1 25
Reliable Poultry Journal	50	75
Poultry Success	1 00	75
Blooded Stock	50	60
Successful Farming	1 00	60
Southern Fruit Grower	50	85
Shepherd's Criterion	50	75
Commercial Poultry	50	75

When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with Southern Planter."

We cannot under any circumstances furnish sample copies of other publications.

We will cheerfully quote our best price on any list of publications submitted to us.

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Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apriots,			

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AGENTS WANTED.

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PLAIN PROPOSITIONS FOR PRACTICAL PEOPLE.

I used to be puzzled by the common idea that because a man dealt in horses he was generally credited with being "tricky" and a "sharp," but after years of association and dealings with this class I often hesitate before accepting the word of a horseman. Perhaps I have been thrown in later years with the most unreliable of the dealers and importers, however, I have never been "gulled" by any of them, and after a few minutes horse talk I generally let them understand that I will give them the "horse laugh" and they let me severely alone.

If any man or set of men will look at their propositions in a logical manner they will soon see that half of their talk is unreasonable rot. Not long since I ran across a couple of salesmen with two imported three-year-olds, and they were giving a clump of Virginia farmers a number of nonsensical ideas all I soon saw, for a purpose. Among a number of things they said that a three-year-old stallion should serve from four to six mares a day and that the colts from such mating would be more numerous and would also be better, etc., and that the importer could and did undersell the home breeder for the same class of horses. Now, life is too short to follow these fellows and expose the lies they tell, but men of sense should see for themselves that the importer talks imported horse versus the homebred because they are not breeders but importers who make fortunes dealing in imported stuff. No first-class stallion is peddled over the country for sale and if you go to the barns of a first-class importer, he will congratulate upon your good judgment in coming to the barns, as he will explain that the best stallions are sold there and not hawked and hauled around the country at great risk and expense. I used to think that only showmen and owners of menageries bought monstrosities at big figures, but since I have seen stallions sold by some importers at from \$2,000 to \$3,000 each, I think the farmer is fast becoming a competitor of the circus man or side show business.

Yours, etc.,

JNO. F. LEWIS.

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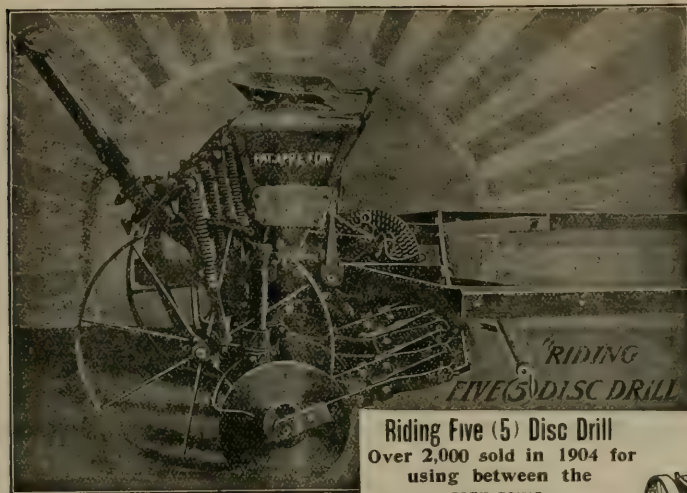
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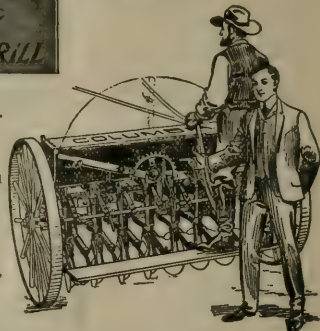
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AN OLD CURE FOR IVY POISON.

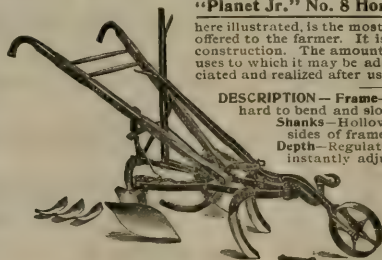
This is the season when the person who takes woods rambles is very likely to suffer for days thereafter with swollen wrists and itching hands, sometimes suffering real agony, from ivy poison. Poison oak and ivy are much like the copperhead snakes in the hills in that both seem to try hard to torture human beings with their poison, and will do so if they come too close, especially in the spring. A physician once told us that there was nothing that would cure ivy poisoning quickly, but that doctoring it and letting it alone took about equal time, so he advised washing the parts affected quite often, and letting it take its course. Now, the cure consists in a very simple adherence to two things: Preventing the spreading of the poison and drying it up quickly. Its spread can only be prevented by washing frequently with hot water; its cure by anointing the affected parts with tincture grindelia, procurable in any drug store, as soon as the skin has been dried. Every camp outfit should contain a four-ounce bottle of grindelia. Its cure is very rapid, and it soon stops the almost unbearable itching by which ivy poison is first noticed. This remedy is a very old one, but it is not known as well as it should be.—From Field and Stream for June.

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Race record 2:27, trotting. Bay horse, 15.3 hands; weight, 1,050 pounds, by Electioneer, 12 $\frac{1}{2}$, sire of Saxon, 2:09 $\frac{1}{2}$; Sunol, 2:08 $\frac{1}{2}$; Palo Alto, 2:08 $\frac{1}{2}$, and 164 others. 1 dam Esther, dam of Expressive, 2:15 $\frac{1}{2}$; Express, 2:21; Kelly, 2:27, and Elwina, 2:27, by Express. 2 dam Coliseum, by Colossus. 3 dam Capitola, by Vandal, etc., back for twenty generations or more.

KELLY represents the highest type of a trotter, having the beauty of form and finish of a thoroughbred, with the wonderful trotting gait of the famous Electioneer family. His record of 2:27 does not indicate his speed limit, as he worked a quarter in 32 $\frac{1}{2}$ seconds, a 2:10 gait at two years old, and one in 31 seconds, a 2:04 gait at five years old. With him docility, sweetness of temper and fearlessness are characteristics uniformly transmitted.

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Registered trotting stallion WOLFORD, 25537, richly colored bay horse, bred by O. P. Alford, Lexington, Ky., by Judge Salisbury, son of the renowned Nutwood, 2:18 $\frac{1}{2}$; dam Norma Sprague, by Governor Sprague, 2:20 $\frac{1}{4}$. He is well formed, handsome and stylish, with good manners and game to the core. Is a full brother to Ramona, sire of Geers, 2:11 $\frac{1}{2}$, etc., and himself gets large, handsome colts. Wolford is richly bred. He gets the Gov. Sprague cross through his dam, which figures in the mighty trotters Tiverton, 2:04 $\frac{1}{2}$, and Sweet Marie, 2:04 $\frac{1}{2}$. Offered simply for want of use, and at a price that he can earn with ease this fall in the stud, and that to quick buyer is \$200 probably less than half his value. W. J. CARTER, P. O. Box 929, Richmond, Va., or 1102 Hull street, Manchester, Va., phone 3380.

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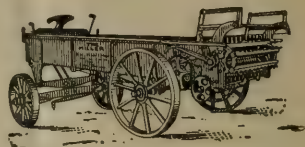
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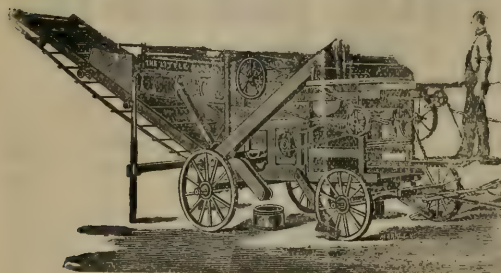
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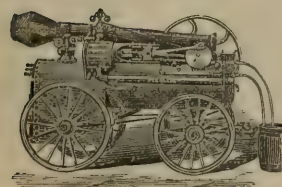


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RECIPE FOR BLACKBERRY WINE, TEN GALLONS.

Blackberries have much fermenting matter and comparatively little sugar, and when bruised pass rapidly into the acetous condition, turning red; it is therefore important that the whole process described below should be put through as quickly as possible; it need not take longer than an hour:

The implements to be provided are, a new or clean eight or ten gallon tub, a new ten gallon cask or one that has had no other liquor in it than whiskey or brandy. A straining bag of strong cheese cloth or coarse bagging, boiled, so as to free it from all dressing. A large funnel, a dipper and pint measure of well coated agate ware; no tin or iron ware or vessel should be used, as it discolors the wine. z

Dissolve twenty pounds of granulated sugar in twenty-four pints of water, making about thirty-seven pints of syrup. Pour thirty-two pints of this into the cask. Twenty quarts of blackberries, well ripened and freshly picked, with all unripe and red berries removed, are put into the tub, into which two gallons of water have been poured; mash them thoroughly by means of a six inch square board upon the end of a staff, then strain the whole through the coarse bag into the cask. There is a good deal of muckage in the juice, so that much squeezing and manipulation is necessary. Return the pomace to the tub, pour on a gallon and a half of water. Mash

and stir well and strain into the cask. Shake it well to mix the juice and syrup. Fill the cask with the reserved syrup, set it aside to ferment, covering the bung hole with a wet cloth, and keeping the cask full, as its contents work out in fermentation, with the reserved syrup. When fermentation measurably ceases bung up tight. In March or April siphon off the clear wine and filter the voluminous less, bottling or returning to the washed cask. P.

CATALOGUES, PAMPHLETS, ETC.

Virginia Polytechnic Institute, Blacksburg, Va., 1904-1905.

Elizabeth College and Conservatory of Music for Women, Charlotte, N. C. Eighth Annual Catalogue, 1904-1905, with announcements for 1905-1906.

This catalogue is beautifully illustrated, and is altogether a highly creditable presentment of a fine institution.

Severance Tank & Silo Co., Lansing, Mich., represented by A. M. D. Holloway, Philadelphia, Pa. This catalogue is full of valuable information for any one intending to build a silo. Send for a copy to Mr. A. M. D. Holloway.

Virginia Justice and Citizen, a monthly law journal, devoted to the interests of justices of the peace and other subordinate officers of the State. Published by Hurst & Co., Pulaski, Va. \$1 per year.

The Chick Book. Contains the experience of the world's leading poultrymen and all the latest and most trust-

worthy information about hatching, rearing and fattening chickens. Published by The Reliable Poultry Journal Publishing Co., Quincy, Ill. Price, 50 cents. We can supply this at the published price.

CHANGES IN THE MOON.

A man in Michigan by the name of Moon got married, and that was a change in the moon. In due time his wife presented him with a daughter, and that was a new moon. Then he went to town and got drunk for joy, and that was a full moon. When he started home he had 25 cents in his pocket, and that was the last quarter. His mother-in-law met him at the door with a rolling pin, and that was a total eclipse, and he saw stars.

Absorbine removes shoe boils without leaving a scar, removing the hair, or laying up the horse. Mr. E. Breslin, Gazenovia, N. Y., writes under date June 17, 1903: "I have been using your Absorbine for some time. I think it is the best thing I have ever seen. It took two shoe boils off without leaving a blemish, when I have seen others butcher them." Absorbine can be procured from your druggist or I will send a bottle express prepaid upon receipt of \$2.00. W. F. Young, P. D. F., 109 Monmouth St., Springfield, Mass.

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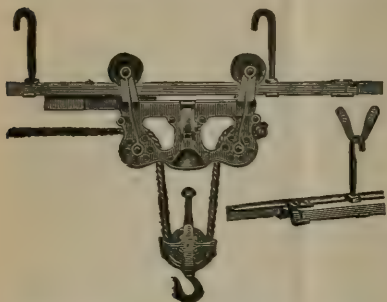
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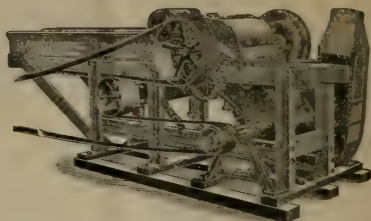
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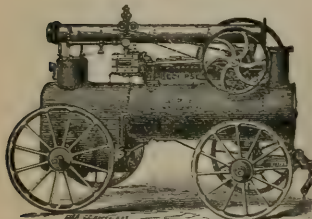


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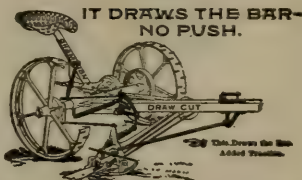


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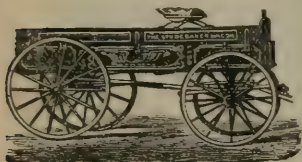


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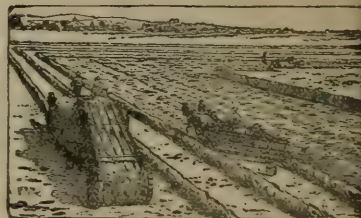
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The Southern Planter.

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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

66th Year.

Richmond, Va., August, 1905.

No. 8.

Farm Management.

WORK FOR THE MONTH,

In our opening article in the July issue we said that more rain was needed to ensure a full crop record throughout the South. The month of July to this writing (20th instant) has given this in even greater abundance than was called for in almost every section, and especially in the western sections of this and the adjoining States. In those sections rain has been almost of daily occurrence until the middle of the month, and serious damage has been done to wheat and oats in shock and to the hay crop. In the middle and eastern sections, whilst there have been pretty frequent rains, they have not been of such a character or so constant as to do serious injury; indeed, in some parts of these sections, especially in the more Southern Atlantic and Gulf States, more rain is needed. The rains have been usually accompanied or followed by high temperature, and corn, grass and forage crops have made remarkable growths and now look magnificent and promise abundantly. Tobacco and cotton are, however, both distinctly injured, tobacco by too much rain and cotton by too little. Neither of these crops promise to be good. Cotton is short and small over a large section of the belt, and in other parts is buried in weeds and grass, and in many places much of it has been abandoned.

The average condition of the winter wheat crop still continues to recede, and on July 1st stood at 82.7, as against 78.7 last year, and a ten year average of 77.8. Since this report was made up much damage has undoubtedly been done by the rains, and

we expect to see a still further reduction in conditions in the next report. The spring wheat crop stood at 91.0 on the 1st July, as compared with 93.7 a year ago, and a ten year average of 89.3. The average condition of the two crops combined on July 1st was 85.8, as compared with 84.5 a year ago. We see no reason to change the opinion we held a month ago, that the wheat crop of the country whilst it will be larger than that of a year ago, will fall far short of being the large one predicted some time ago. In this view we are supported by Mr. Hill, of the Northern Pacific Railroad, who usually knows more about the wheat crop of the country than most men, as it is a large part of his business to arrange for its transportation. He thinks the combined crop will fall short of 600,000,000 bushels.

The corn crop of the country shows an increased area of over 2,000,000 acres. The average condition on July 1st was 87.3, as compared with 86.4 a year ago, and a ten year average of 87.6. This condition we expect to find further improved in the next report. The promise is for an excellent crop of corn everywhere.

The acreage of tobacco is less than that of a year ago by about 50,000 acres, and the condition on July 1st was 87.4, as compared with 85.3 a year ago.

Whilst it is very difficult to say anything definite as to the cotton crop, as it is charged that the Government reports have been manipulated in the in-

terest of the speculators, yet we are strongly convinced from information outside these reports that the crop will fall far short of that of last year, probably not exceeding 10,500,000 bales.

The apple crop is not going to equal the earlier expectations. Whilst from some sections we hear good reports, yet the general report is that much of the fruit has dropped both here and in the North.

The prices of all farm products keep up well, and the demand is good. For nearly all staples values are distinctly higher than a year ago, and we are inclined to think that these values will be maintained, and in some products be still further advanced. We see no need for haste in selling.

The saving of the forage crops should have attention during this and the following months. These are now making such wonderful growth and are being so much more largely grown all over the South than formerly that much labor will be needed to handle them. Do not let them become overripe before cutting. Cow peas should be cut when the first pods are turning yellow. During a trip to Southwest Virginia taken recently we were much gratified to see that this crop is being much more largely grown in that section than has been the case in the past. Although they have good grass sods wherever care is taken to maintain them, yet they will find cow peas a great help in maintaining fertility and in providing roughage for the stock. In our June issue we published an article on the saving of the crop for hay, to which we invite attention. The one great point to be observed is not to haul the hay to the barn when damp with rain or dew. The fact that it contains some moisture derived from the natural juices of the plant will not impair the quality of the hay, but rather enhance it and make it more palatable, but rain or dew on it will surely result in mouldy hay unfit to feed to stock. Soy beans may be cured like cow peas, or be cut and set up in shocks like grain. Soy bean hay is much less susceptible to damage by rain than cow peas, and may remain in cocks in the field much longer without suffering damage even in showery weather. Sorghum when not grown for the seed should be cut when the heads form, or even earlier than this when sown thick for a hay crop. It should be allowed to lay on the ground for a day or two and wilt thoroughly before being put into shocks or cocks. It will keep well when set up in shocks, and will suffer little injury, though it remain in the field most of the winter. Millet should be cut when in

bloom and before the seed forms, and be cured like a grass crop. Where cow peas are grown for the seed they should be cut with the mower or reaper when most of the pods are turning ripe and be handled as little as possible, so as to avoid shelling the peas. Put up in cocks as soon as can be safely done and leave to cure out.

The corn intended for silage should be ready for cutting in this and the following month. It is well not to be in too great a hurry to cut the crop. Let the grain in the ears become fairly hard and the stalk somewhat fully matured and the product will be a much sweeter silage than when cut when the stalk and blades are full of sap and moisture. Do not fill the silo too fast. Better cut half a day and fill half a day, rather than keep on continuously filling. The silo will hold more. The air will be more completely driven out and the heat will be more quickly raised and better maintained, and the quality of the silage will be better. See that the silo is in good repair before being filled, and if it be a hoop silo that the hoops are properly adjusted so as to allow of expansion and yet not so loose as to not exclude the air. A coat of tar and pitch mixed and applied hot to the inside of the silo a week before it is filled will help to preserve it and exclude the air. When filling see that the cut forage and ears are evenly distributed over the whole silo, as they drop from the carrier or blower, and that the sides and corners are kept well filled and made solid, so that no pockets of air are left to spoil the silage. When full or the whole crop is in cover with a foot of chaff or cut straw or cotton seed hulls or marsh hay and sprinkle this freely with a watering can so as to make it all thoroughly damp. As the silage heats this will fill with mould, mat together and effectually seal the silage and keep it perfectly.

Second crops of clover and third and fourth crops of alfalfa (we know men who have already cut three crops of alfalfa this year from the same piece of land, and yet there are men who still doubt whether we can successfully grow alfalfa in the South) should be cut and cured as fast as they become sufficiently mature. Do not wait until the crops are in full bloom, but cut just when the first heads are beginning to open. At this time the greatest nutriment is in the leaves and stalks. As the nights become longer and the days cooler more time and care will be required to secure the curing of the crop, but hay cured in cool weather is always fuller of feed and more nutritious than when burned by the sun, and

therefore the time and care required is never wasted. Cure by putting in windrow as soon as the crop is well wilted, then after laying in the row a day put up into small cocks, and as these cure add two or three together until you have the whole crop in a few large cocks well cured, and then haul to the barn. Do not cut or graze alfalfa or clover later than September. Let what grows after that month remain on the ground to protect the crowns of the plants during the winter.

The preparation of the land for the seeding of grass and clover should have immediate attention. If a man intends to make a success in growing these crops in the South they must be sown in August or September at the latest, and better by far in August. In our last issue we pointed out some of the requirements for success in the production of these crops, and to that article we invite attention. The primary factor is early perfect preparation of the land. Those who have read Mr. Clark's articles on grass growing, which we have published, will know how he emphasizes this point of perfect preparation, and in this issue will be found an article from Mr. T. O. Sandy explaining how he prepares his land on which he makes 7,000 pounds of hay to the acre. Prepare as perfectly as possible by plowing, harrowing, rolling, and reharrowing and rolling until every clod is broken and the seed bed as fine as a garden bed, and then the small seeds will have a chance to germinate and send out their small rootlets and obtain support. Make the land rich with manure free from weed seeds or with bone meal 400 or 500 pounds to the acre. Sow plenty of seed, not less than two bushels, to the acre, and harrow in and then roll. Sow only grass and clover and no grain with the crop. Don't try to grow two crops at one time. The grass and clover seeded alone will in the long run pay far better than a grain and grass crop seeded together. For a meadow, sow orchard grass, tall meadow oat grass and herds grass mixed in equal parts, two bushels to the acre, and 10 pounds of red clover seed per acre. For a clover sod alone sow 15 pounds of clover seed per acre. For a pasture add to the above grass seeds meadow fescue and Virginia blue grass, or on the limestone soils of the Piedmont and Valley sections, Kentucky blue grass. When seeding grass and clover sow five or ten pounds of alfalfa seed along with the clover. This will help in infecting the land with the alfalfa bacteria, and thus prepare it to grow that crop.

ber is the best time in the year for sowing alfalfa in the South, in all the country east of the mountain ranges. In the mountain sections the crop does best seeded in the spring. There are still many farmers who doubt that we can grow alfalfa successfully in the South, but from the results we have personally seen and the reports we have had from all sections of this and adjoining States, they may safely abandon this idea. We have seen it growing successfully from nearly sea level in the East to the mountains, 2,000 feet above sea level, in the West. Wherever land is properly prepared, made sweet with lime, and rich with manure or fertilizer and properly infected with the specific bacteria of the alfalfa plant, the crop will grow and prove permanent, and the greatest producer of the most valuable hay which can be fed to stock, and which in the market commands the highest price. With such a certainty assured, if only well recognized rules are followed, why should not every farmer in the South have his alfalfa field or fields like the farmers of the West? It would mean to him an unfailing source of profit for years without reseeded. We would most strongly urge that attention be at once given to this subject. Select a piece of the best land on the farm and one cleanest of weed seeds and plow it one or two inches deeper than it has ever been plowed before, and if it has a clay subsoil or a hard pan break this with the subsoil plow thoroughly, then spread 15 or 20 bushels of lime on the surface and harrow in lightly. Let lay for a week or ten days, and then commence to work it with a disc, cutaway or Acme harrow or a heavy drag harrow or cultivator. Continue this working first in one direction and then in another, and use the roller between each working until the whole depth of the soil is made as fine and loose as possible. If clean farm pen and stable manure is available apply 20 loads per acre and work into the soil thoroughly. If this be not available then apply 500 pounds of bone meal to the acre and work in thoroughly. Then sow 25 pounds of inoculated seed to the acre, sowing half the seed each way of the field. If soil from an alfalfa field, or from a burr clover field or from land growing sweet clover can be had, spread one or two hundred pounds of this soil per acre on the prepared land before sowing the seed. After the seed is sown harrow in and roll the land. The alfalfa bacteria can be had from the Virginia Experiment Station at a cost of 25 cents for the quantity required for an acre of land, or inoculated seed ready for sowing can be had from T. W. Wood & Sons, of Richmond, Va. When selecting the land for this crop see that it is well drained land and with the natural water level

From the first of August to the middle of Septem-

of the underlying water not nearer the surface than two feet, and the land so laying that no water will stand on it. Alfalfa is very susceptible to injury from standing water either immediately below or on the surface. Whilst the work of preparing the land and seeding the crop may seem a tedious and somewhat expensive one, yet it should always be borne in mind that when once a successful stand is secured it will stay there, and go on producing three or four crops per year for an indefinite number of years, if only it be top dressed every year with well rotted farm pen or stable manure, with some bone meal or phosphate added. We have reports of fields which so treated have gone on producing good crops each year for fifteen or twenty years. Such results are worth efforts.

The seeding of crops for providing winter and spring grazing and spring and early summer hay crops and for providing a cover for the soil during the winter, and thus preventing loss of fertility, should be attended to. The best crops for these purposes are crimson clover and the Hairy and English vetch. Crimson clover should be first seeded. It can be sown at any time from July to the end of September. The Hairy vetch should be sown in August and September, and the English vetch in October and November. These crops, in addition to their value as winter and spring feeds and conservers of fertility, are great improvers of land both as humus making crops and as gatherers of nitrogen from the atmosphere. In a recent experiment, conducted at the Delaware Experiment Station, it was found that an average crop of crimson clover yielded from 139 to 188 pounds of nitrogen per acre, with the exception of one crop, which yielded 216 pounds to the acre. Thirty days before full bloom the yield of nitrogen amounted to from one-half to fourteen-fifteenths of the yield at full bloom, and from 12 to 50 per cent. of the nitrogen was found in the roots, so that if the crop was removed for hay the value to the land was still very great, it being estimated that after mowing the crop the average nitrogen left in the soil and stubble and in the roots was on an average from 35 to 40 per cent. of the total nitrogen of the crop. The Hairy and English vetch are equally as valuable as crimson clover for feed, and as nitrogen gatherers; indeed, in several cases reported on the Hairy vetch has been found to provide more nitrogen for the soil than crimson clover. Where land has been well cultivated for the previous crop good stands of crimson clover and vetches can be secured by merely breaking the surface with the disc harrow or a heavy drag harrow or cultivator, and then

sowing the seed and rolling. But where the land has not been so cultivated then it ought to be plowed and be finely broken before the seed is sown. All these crops are greatly helped by a dressing of lime, say 20 to 25 bushels to the acre, to make the soil slightly alkaline, as only in such a soil can the bacteria grow freely. An acid condition is fatal to this growth, and without the bacteria the crop will not flourish. Where clover of any kind has previously grown the soil will be infected with the proper bacteria for crimson clover, but where this is not the case inoculated seed should be sown or the field be inoculated with soil from a clover field. The vetches also require inoculation if sown on land upon which these plants have not previously been grown. Inoculated seed of all these crops can be had from T. W. Wood & Sons, of Richmond, Va., or the bacteria can be had from the Virginia Experiment Station at a cost of 25 cents per acre. Wherever the wild vetch grows vetches of both kinds will succeed without inoculation. Crimson clover is a seed that germinates very quickly, and is apt to be killed out just as quickly if a continued hot season should set in just after germination. It is well, therefore, not to sow all the intended crop at one time, but to seed an acre or two one day and then to wait a few days and seed again, and so proceed until all the crop is sowed. Some, if not all, of the sowings are sure then to make a stand. In sowing these crops of crimson clover and vetches always seed with them a mixture of wheat, oats and rye in equal parts. Sow 10 to 15 pounds of the clover seed and three-fourths of a bushel of the grain mixture per acre. If sowing vetches, sow one-half bushel of vetch seed with three-fourths of a bushel of the grain mixture. If the crop is only intended for pasture, and to improve the land, two or three pounds of Dwarf Essex rape per acre may be sown with the crimson clover and grain, and thus increase the pasturage, or two or three pounds of turnip seed may be sown per acre with the clover, and thus raise some good roots for the stock. If, however, the crop is intended to be cut for hay neither of these seeds should be sown, as they will not make hay. All these leguminous crops are great consumers of phosphorous and potash, and therefore can be greatly helped by the application of 200 or 300 pounds of acid phosphate to the acre, and of 50 pounds of muriate of potash in lands which lack potash, but in the majority of our lands east of the mountains potash is usually found in sufficient quantity without applying it if only it is made available by the use of lime.

Dwarf Essex rape and ruta bagas and turnips

should be sown this month and September. The rape makes excellent pasturage in the fall and winter for hogs and sheep, and if the winter be not very severe will stand over and make another growth in early spring. Sow four pounds of rape seed per acre broadcast, or two pounds per acre if sown in drills three feet apart. Sown in drills and cultivated and thinned makes the heaviest crop. Rutabagas and turnips should be sown at the rate of four pounds to the acre broadcast, or two to three pounds in drills three feet apart. The heaviest crops can be grown sown in drills three feet apart and thinned to stand ten inches apart in the rows, and frequently cultivated. To make a heavy yield the land should be made rich with farm pen manure and phosphate and potash.

Although too early yet to sow oats and wheat, it is not too early to begin to get the land ready for these crops. Winter oats should be seeded before the middle of September in order to be certain of a good crop, and therefore there is not much time to waste if land is intended to be sown with oats. Plow and prepare the land well and give the crop 200 or 300 pounds of acid phosphate per acre. The light yield of the winter oat crop so common in the South is mainly caused by late sowing and putting the crop on poor land without any help from manure or fertilizer. It is poor farming to try to grow this crop in that way. If it is worth growing at all, and it is, give it a fair chance of success. It is true that oats will grow on poorer land than wheat and make a fair yield, but a fair yield is not sufficient. The best yield possible should be aimed at. Sixty bushels to the acre can be grown if the crop be fairly treated and such a crop will cost no more for preparing the land and harvesting than one of half that yield. Better sow half the area and make a maximum yield than twice the area with a minimum yield. There is much more profit in so doing.

Wheat should not be seeded before October, but if a good crop is to be grown the land should be plowed early, so that it may be frequently cultivated, rolled and harrowed before seeding. The secret of success in growing wheat is deeply broken land finely prepared and well compacted below the top three inches before the seed is sown. It takes time to so prepare land, therefore begin at the first opportunity. Plow the land deeply, apply 25 bushels of lime to the acre and harrow in lightly and let lay for ten days, and then harrow and roll every week or ten days until time to sow. This will ensure a good seed bed, and

this, with plenty of plant food available in the soil, will usually ensure a good crop. It should always be borne in mind that the only time when a wheat crop can be cultivated is before it is seeded, except to the extent to which it can be helped by harrowing it in spring, and therefore the importance of well preparing the land before sowing.

Do not waste time pulling fodder from the corn crop. The doing of this work simply means robbing the corn crop of its means of making a good yield and providing a costly food for stock. Wait until the corn is glazed and dented, and then cut up the crop at the root, set up in shocks to cure, and thus get both the corn, the fodder and the stalks. Nearly half the feed value of the corn crop is in the stalks and fodder, and merely to pull the blades is to waste the larger part of this value.

THE INFLUENCE OF NODULES ON THE ROOTS OF LEGUMINOUS PLANTS.

Whilst we have for several years emphasized the importance of securing the growth of nodules on the roots of the various leguminous plants, and with this end in view have more recently urged the inoculation of the soil with the specific bacteria of the crop to be grown, it has only recently become known that these nodules have other important functions than promoting the growth of the crop and enriching the land with nitrogen. Experiments conducted at the Michigan Experiment Station have conclusively shown that these nodules on the roots have the effect of greatly enriching the plant both as a feed and as a fertilizer. In one experiment conducted there it was found that the leaves and stems of inoculated soy beans carried 17 1-4 pounds of protein per hundred pounds of the fodder, whilst those not inoculated and carrying no nodules had but 11 pounds per hundred of protein, as the average on two years' experiments. When both years were taken together the content of protein in the stems and leaves was nearly 57 per cent. greater in the inoculated plants. With cow peas the inoculated plot was 47 per cent. richer in protein than the one in which the plants were free from nodules on the roots. The importance of this increased feeding value of the crop when inoculated or carrying nodules on the roots is great, and should not be lost sight of when deciding whether to inoculate a crop or not. When used as an improver of the land only, a crop carrying nodules on the roots is more valuable by nearly 50 per cent. than a crop without nodules. Inoculated soy beans provided

113 pounds of nitrogen per acre, whilst an uninoculated crop only furnished 75 pounds. Inoculated cow peas—that is to say, peas carrying nodules on the roots furnished 139 pounds of nitrogen per acre, whilst a crop without nodules only supplied 118 pounds.

The seed of soy beans was fully 16 per cent. richer in protein when saved from a crop with nodules on the roots than when saved from a crop without nodules on the roots. This means a much higher feeding value for the nodule bearing crop. If your land is not infected with the proper bacteria to ensure nodules see that it is inoculated.

LIME AS AN IMPROVER OF LAND.

As the season when lime should be applied to land in order to secure the best results is now rapidly coming round again we revert to the subject once more as we are so satisfied of its necessity on the lands of the South that we feel we should not be doing our duty to the farmers unless we took every opportunity of urging that attention be given to it. We recently took an opportunity of inspecting the farm of Mr. T. O. Sand^f, of Nottoway county, Va., who for the past two or three years has been acting on our advice to apply lime liberally on his land. What we there saw has most fully convinced us that what Southern lands most need is lime and humus, and not commercial fertilizer. Use the lime and you will get humus making crops. We have in previous issues pointed out the worn out character of the land on Mr. Sandy's farm at the time when he took possession of it a few years ago. A tenant refused to continue in his occupation of it at the rent of only the taxes on the land. We saw growing on it as fine crops of wheat, oats, clover and grass as any man could desire to raise. The oats were the finest crop of winter oats we have seen for years, and would make, we should estimate, at least 50 bushels of grain to the acre and a heavy yield of straw. The clover, as will be seen by a communication in this issue, made three and one-half tons of hay per acre, and with the rains we have recently had we should expect the mixed hay grass to make at least two tons to the acre. Upon nearly all the land on which these crops were growing lime has been applied at the rate of one ton to the acre. The corn crop was looking very promising, and to this land lime also had been applied. Wherever lime had been used it was easy to see the difference in the quality and quantity of the crop raised. Compared with adjoining lands, on which no lime had been applied, Mr. Sandy's farm looked

like an oasis in a desert. His corn was fully twice as tall and three or four times as much on the land as on any other land in that section. Do not neglect to make arrangements for liming your land this fall and winter. Whether it be light or heavy land lime will help it.

MR. CLARK'S FIRST CROP OF HAY FOR 1905.

Editor Southern Planter:

My first crop of hay is in the barn. Fifty-eight (58) tons from 11 acres, cut June 26th, 27th and 28th, finished July 1st. Six days of clear sunshine, not a drop of rain. Each section had three full days of sunshine, and was stirred with two of Richardson's Bullard Hay Tedders (and they are perfection), going all the time to help it dry. For once at least I have my hay in the barn dry fifty-eight (58) tons, or 5 1-4 tons per acre.

Last years cut was a week later, not as good weather, weighed two tons more. This year's crop was cut just as the heads showed first blossom. The seven-eighths acre field this year gave six and one-half tons. This field in fifteen and one-half years has produced from one seeding one hundred and twenty-eight (128) tons. The writer is not in a hurry about going West to get a farm.

By the way, there is now much interest taken in the production of alfalfa. I have started in with a three and one-half acre section to try my luck, on a high, dry knoll, one hundred feet above the waver line, surface full of rocks. I have heretofore removed fifteen thousand (15,000) tons of rocks to the acre, and now when seeding with the aid of my Double Action Cutaway Harrow, and my 26 Reversible Sulky Disk Plow, found and removed over one hundred tons more of rocks and stones, and when the twenty-five (25) pounds of alfalfa seed was sown upon each acre, the surface was dry and intensely cultivated to the depth of six inches or more. I am now depending upon intense cultivation and Rogers & Hubbard's high grade fertilizer to make a crop of alfalfa. They tell me that I will surely fail.

A gentleman was here, a Mr. J. G. Curtis, of Sidney, N. Y. He came to see my grass field 600 miles for an hour to learn how to raise grass. He said he had gone into alfalfa, putting in ten acres, and had adopted my method of grass culture on fifty acres. He is going to clip his alfalfa over once or twice, and let the clipping lie on the field. He does not expect to get anything for hay this year. He says that is the way they tell him that he should do, but I expect to get a ton or more of good alfalfa hay by Septem-

ber 1st, or earlier. My seed was sown June 3, 1905. It is now just a month old, fully eight inches high.

They all tell me it will turn yellow and die, but I never knew any kind of grass to die when it had something to live for. I wrote the United States Department of Agriculture, I think in February. Hon. J. M. Westgate, the Scientific Assistant, wrote me very fully about alfalfa, and sent me Bulletin No. 215, Hon. A. S. Hitchcock's treatise on alfalfa. If I had received them before sowing, they would have been of service; but since this information did not get here until after I had sown my seed, I shall have to let it go along on my own best judgment and abide results. I will report later if I have good luck, and will add it to my grass circular.

I am satisfied that alfalfa can be successfully grown on fields too dry for the ordinary grasses. I have used the Clark's Cutaways in resetting thousands of acres of alfalfa along the west coast in past years. Had an order this morning from Phoenix, Ariz., for cutaways to reset alfalfa.

If your patrons will send me a two-cent stamp, I will send them a circular, which will tell how to grow five (5) tons of timothy and red top to the acre.

You may ask how about that 1,425 plum tree orchard. The late frost killed nearly all the plums this year, and I am letting it rest.

Higganum, Conn.

G. M. CLARK.

CANADA OR BLUE THISTLE.

Editor Southern Planter:

While on a recent trip from Radford to Roanoke I noticed a few of the dreaded Canada thistles scattered all along the roadside. The farmers were letting these ripen seed to scatter this pest broadcast over their own and adjoining farms. It could be killed out so easily now. There were a few stalks scattered over my bottom land two years ago, and by cutting the plants off before seed ripened just beneath the surface of the ground for two years, I could find only three plants left the third year. Each farmer along the road between Radford and Roanoke might clean these thistles out by giving the subject just a little attention in cutting out below the ground surface before seed ripens. After seed ripens the plants should be burned. I know of one farmer who spends much time each year in cutting the thistles, and they seem to get thicker. He does not cut them till after seed ripens, and never cuts them clean out. When these thistles first came on his farm, perhaps through grass seed, he could have

cleaned them out in one day. Now he spends several days each year, and the pest grows worse. We don't want this pest in Virginia. We would much rather have good blue grass growing where every thistle stock grows. Will the farmers join in and help to whip it. If each man will clean it off his own farm the victory will be won.

R. H. PRICE.

Montgomery Co., Va.

HAY PRODUCTION IN SOUTH SIDE VIRGINIA.

Editor Southern Planter:

It may be that some of your readers are interested in the raising of grass in South Side Virginia. I will give them my experience on a ten acre field. The land was in fairly good tilth to start with. I plowed it in June, 1904; it was then run over both ways in July with a spring tooth cultivator, following this with a two-horse harrow. I then put on one ton of lime to the acre with the spring tooth cultivator to cover the lime. The first of September four hundred pounds of pure raw bone was applied to the acre, and twenty-five quarts of timothy, red top and sapling clover per acre were also seeded. The seed was raked in both ways with a harrow, then rolled both ways. The 22d of June, 1905, the field was ready to cut. After the hay was cut and cured I weighed one acre, the yield being 7,000 pounds. I am convinced that with a little more cultivation before seeding the yield can be increased.

Nottoway Co., Va.

T. O. SANDY.

RUTABAGAS AND TURNIPS AS A MONEY CROP.

Editor Southern Planter:

The average price of turnips throughout the South is 50c. per bushel, while we have repeatedly seen rutabagas retail at 5c. per pound. Where either of above are planted at the right time, on rich and well prepared ground, planted in drills 15 inches apart, and given good distance in drill as well as thorough, clean, but shallow and sufficiently frequent culture, a profitable crop of choice, crisp, tender and sweet roots may be looked for with confidence.

Rutabagas and turnips will not produce a profitable crop on poor, starved soil; in fact, even such land as will produce 50 bushels of corn or a bale of cotton per acre will not grow a crop of choice, crisp, tender and sugary turnips without previous application of fertilizers in generous quantity.

To make success, in the way of a bountiful harvest of good turnips, doubly sure, the area to be devoted to turnips should have been decided on early in the season, and the land liberally fertilized, deeply

prepared and thoroughly firmed some time ahead of planting season.

Twenty two horse loads of manure is as little as one should try to get along with in the way of manure per acre, and this to be evenly distributed and plowed under as fast as hauled, thoroughly mixing it with the soil so that none of the volatile elements escape.

Now, while it is a fact that stable and lot manure is all right for turnips (in fact, hard to beat) as far as it goes, it does not go far enough; it has a tendency to cause too leafy a growth when it is the roots and not the leaves that we are desirous of obtaining in quantity. To obviate this tendency to grow a luxuriant crop of leaves, at the expense of the roots, the phosphates are especially useful. An analysis of the turnip also shows it to be rich in potash, and in order to secure the best results, and secure a rapid as well as continuous growth of crisp, tender and succulent roots instead of those that are dry, hard, pithy or woody, a liberal supply of all three of the leading elements of fertility are needed, and should be used in addition to the 20 loads of manure. The turnip, like cabbage and cauliflower, is a potash eater; and if a big crop is looked for, it is necessary to either plant on soil that already has plenty of potash in it, or else put plenty of it in. One thousand pounds of a fertilizer analyzing of nitrogen, 4 per cent., available phosphoric acid 7 per cent., potash 8 per cent., will be little enough to apply per acre in the drill, under the plants, and thoroughly incorporate with the soil. Or, if home mixing is preferred, the following may be used: Nitrate of soda, 125 pounds; cotton seed meal, 275 pounds, acid phosphate, 13 per cent., 450 pounds; sulphate (or muriate) of potash, 150 pounds. The manure should be put in the ground as early in the season as possible, the fertilizer just previous to planting.

There are two reasons why the Southern farmer has no better success with rutabagas than he has one is that he plants too soon for his latitude, usually in July, while 1st to 15th of August is early enough; the other is that his ground is not made rich enough, neither is it put in as fine tilth as it might, could and should be; due to a lack of this thorough preparation, liberal fertilization and later planting, the plants are "neaky," badly shaped and tough.

Turnips are best sown from 20th August to September 15th. Plant medium late, but push them forward as speedily as possible by liberal fertilization and thorough culture, and the product will be tender, crisp, sweet and luscious; while, when raised on comparatively poor soil, and planted early in order to have them of some size by the time winter freezes set in, the product is hard, dry, woody, uneatable and valueless. Time, labor and money are thrown away, while had a little more effort been judiciously expended, a little more expense judiciously incurred, the little extra expenditure of capital and labor would

have resulted in profit rather than loss, a grand success rather than an ignominious failure. Disaster comes sufficiently often without special invitation or undue encouragement.

G. H. TURNER.

Grown in rows 30 inches apart and left 10 inches apart in the rows we have frequently made from 30 to 40 tons of rutabagas, and from 20 to 25 tons of turnips to the acre. No man who keeps live stock, and especially sheep, should be without rutabagas and turnips for winter feeding. He can never hope to be thoroughly successful in raising the early lamb crop unless he has an ample supply of these roots to provide succulent food for the ewes. They will cause ewes to milk freely when every other feed will fail. —E.D.

WHY USE POTASH IN OUR FERTILIZERS? WHAT IS IT GOOD FOR? WHAT DOES IT DO?

Editor Southern Planter:

The first of above queries is called to mind from the fact that there is a slight tendency in some extremely circumscribed quarters to decry and understate potash and to unduly extol and overrate phosphates. What the farmers, those who purchase commercial fertilizers, want, what they are vitally interested in, is getting at the facts in the case. If potash is needed as plant food, of course, it should be used in fertilizers, otherwise not.

Is potash a true "plant food?" Scientists the world over are a unit in asserting that it is. So essential to plant life is it, that, not only will any cultivated plant fail to thrive as it should, but it cannot even live without it.

"But," says one, "we are not disputing the fact of its being a true plant food; nor even that it is equally valuable and equally indispensable, as such, with both phosphoric acid and nitrogen, what we do claim is this," that there is an abundance of it in the soil already; hence, any additional application of it would be uncalled for.

We have in times past and gone heard a great deal about the "inherent fertility" humbug; and now, even Uncle Sam has become a convert and is trying to convert his numerous progeny the country over to the belief that, "there is no such thing as rich soils and poor soils, and that the reason why certain soils produce heavy and others light crops, is not because one is rich in plant food and the other exhausted by continuous cropping." In the same bulletin, No. 22, of the Bureau of Soils, it is claimed that "the difference is due to cultural methods"; but, at the same time, admits that "the cultural methods necessary are not yet fully understood."

This doctrine shows that even science, or rather some of its devotees, can go deranged, stark, staring

crazy; and the farmers of the country, those who have practically (not merely "theoretically") tested the truth or falsity of the doctrine by trying their level best to produce heavy crops on poor soils, instead of hailing Messrs. Whitney and Cameron as public benefactors and realizing the great obligations they are under to these gentlemen for publishing to the world their grand, beneficent and truly astounding discovery! will feel more like applying Festus' language to Paul, and say: Gentlemen, scientist, "thou art beside thyself; much learning doth make thee mad." We do not dispute the statement that "apparently, therefore, all these soils (all our principal soil-types, in fact, all cultivable soils) are amply supplied with the necessary mineral plant foods."

We say, we do not dispute nor deny it, but if these same "mineral plant foods," though apparently present" (though we believe, from both observation and quite a considerable amount of most doleful but eye-opening experiences, that their presence is, in many instances, more "apparent" than real), are present in a latent, insoluble, hence, unavailable condition; of what earthly use is the knowledge of their presence to the average cultivator? How is he helped thereby? Is it not largely a question of "sour grapes?" But, is it not a fact, that if all the mineral plant foods are present in "ample supply" in all soils and for all crops, that phosphoric acid and lime are equally omnipresent with potash? Of course, they are. Such being the case, it is a waste of time to make additional applications of phosphates, of potash, and of lime; and a waste of money to purchase them. All we have to do now is to dive down a little deeper, plow and subsoil until the ground is thoroughly broken 16 to 30 inches deep.

"Ah, consistency, thou art indeed a jewel." What a pity that "theory" is one thing and "practice" entirely another. Right beside land that has made three bales of cotton per acre we have a piece of land that will not even produce a crop of wire grass or poverty weed; nor, with the most thorough culture, can cow peas be grown thereon until they are high enough to mow; yet, by an application of 300 pounds of acid phosphate and 100 pounds of muriate of potash, we have seen a most luxuriant growth established on soils exactly similar in condition to this and profitable crops harvested where before they obstinately refused to grow. Potash, as well as phosphoric acid, increases crops. If you don't believe it, consult the bulletins of the Experiment Stations of the several States. Potassium, in addition to being a large constituent in the wood of plants, and in fruits with acid juices, aids in the transfer of starch from one part of a plant to another. Starch is first formed in the leaves, after which it is made soluble and carried through the cell walls and distributed to different parts of the plants, either as starch, sugar, wood or some other compound; not only does potash

aid in the distribution of starch, but it also assists in its formation. Although phosphoric acid assists in the formation of the seeds of plants, increasing "fructivity" (i. e., number of fruits set), it devolves upon potash to so increase the size, while improving the quality, that productiveness is largely increased by it. This is exemplified in the case of corn on peaty soils, and of the potato on most all classes of soil. We have also found it to influence quite largely the size of cotton bolls, almost doubling their size while the fibre was increased in amount and lengthened as well strengthened, the yield per acre increased and its value on the market enhanced. The horticulturist also finds it alike invaluable and indispensable; improving, as it does, the quality of each and all of his products, and, of course, enhancing their value.

G. H. TURNER.

Burgess, Miss.

As the result of many experiments made in this State and the adjoining ones on the lands lying between the Blue Ridge and the ocean, we are convinced that the need for applying potash in a fertilizer, except for the production of tobacco, Irish potatoes and other vegetables, is rarely necessary. The rocks of the Blue Ridge are rich in potash, and this potash has through the ages been so freely deposited in the soils of the coastal plain that all that is needed for ordinary crops is to apply a dressing of lime to render this potash available.—Ed.

CLOVERS AND LEGUMES.

Editor Southern Planter:

The order of plants to which the clovers belong is a very large one. There are nearly 6,500 species embraced in it, and they range in size from the tiniest clovers to grand locust trees.

It is a very important family indeed, yielding valuable timbers, dyes, gums, and resins, and beyond all, food for man and animals. And the food given by the leguminous plants is of the highest order of nutrients, abounding in protein, the food of bone and sinew, and brain and muscle in distinction from the fat forming foods, as carbohydrates. The bright editor of the Rural New Yorker, speaking of the paramount use of hog and hominy in the South, says that the Southern negro needs beans more than ballots. That is no doubt true, and it is a truth by no means confined to the negro. In an order of plants so large as that of the legumes we must necessarily confine ourselves to a description of a few of the species best adapted to our uses. These are the clovers, red, white and lucerne, or alfalfa, the peas, and cow peas or beans.

I am by no means sure that we have adopted into our list of cultivable plants all that are worthy. I

am very certain that we farmers in central Ohio restrict ourselves unnecessarily in the number of kinds of plants that we grow.

Let us make the general statement, leguminous plants, whether clovers, peas or other species, improve the soil by enriching it, and also its mechanical condition. This truth has been long accepted and taught, but only recently have we understood how this was done. To understand how soils are enriched let us begin a long way back.

At one time we know that the earth was a barren rock, covered for the most part with waters. There was no soil, for the rocks had not disintegrated or been worn away into sand and clay by the action of frost and friction of running water and moving fragments of rock.

Gradually the rock was ground up by the several forces that worked on it. Frost, the main one, perhaps, yet the tooth of time gnaws away the hardest granite even in tropical countries, enough to say that there was at last a covering of earth over the rock—thickest in the low places where the water had washed it down. Now, what elements did this primeval soil contain? Exactly what the rocks themselves contained, not perhaps in the same proportions, for the more soluble ones would, of course, be leached away and washed to the sea. "All plant life is dependent on the available nitrogen in the soil," but certainly this soil contained only traces of elements not present in the parent rock.

These first rocks were rich in potash and phosphoric acid, the two mineral elements so precious to plant life, but nearly without nitrogen, that invaluable element of all organized life, which enters so largely into the composition of plant growth. Now, while the primeval soil contained practically no nitrogen, the atmosphere then as now held no doubt about 80 per cent. of it. Just how we may never know, but it is enough to know that life began both vegetable and animal, and intermediate forms which seem to be either the one or the other, and the plants got their nitrogen, and on their death bequeathed it to the soil, so that the new plants found themselves better provided for, and as the millenniums rolled along the soils increased in depth and richness, and so we come down to our day, and find many soils so fully stored with plant food, including nitrogen, that we can go on mining it out and selling it away for ten, twenty or even fifty years without exhausting the supply.

And in the face of all this there are men who claimed until very recently that no plants could draw their nitrogen from the great abundance of the air! Now, the trouble all along was to discover how plants could draw their nitrogen from the air. Certainly not by their leaves. Experiments showed this time and time again. Some plants rapidly exhausted the supply of the soil; flax, for example, and to-

bacco. Clovers were found to enrich the soil and largely increase the store of nitrogen. The same was observed of locust trees, of peas and many other plants of the same order. How was it done? It was left for the patient, persistent experiments of the Germans to show the how of it.

If you want to know all about how a thing is done and why, you can't do better than to set one of those old University Dutchmen to finding out. He will work at the problem for ten years without surprise or impatience, and never seems to have an idea of giving the problem up. If you want an idea turned quickly into dollars and cents set an American at it—is my advice.

Well, these old Germans experimented with various legumes, peas and lupines principally. Their method of procedure was to take a number of pots of pure quartz sand, absolutely barren of all the ingredients of plant growth and in them to plant seeds of, say peas. Now, one pot would be supplied with potash, phosphoric acid and nitrogen. Another with potash and phosphoric acid, and the nitrogen left out. All would be watered with distilled water. It was found that the plants in the pots containing no nitrogen grew a very small plant, sickly and soon dying. On analysis of the soil it was found that no nitrogen whatever had been added to the soil beyond what was contained in the seed. These experiments were published, and at about that time several very knowing writers began to assert that clover added no nitrogen to the soil beyond what was contained in the seed sown. My own faith was considerably shaken. If this were true the world was doomed inevitably to relapse into a barren desert at last. We were too hasty. The Dutchmen had not nearly gotten through with their experiments. They now went to a field where legumes were growing thriftily, and taking a small quantity of earth from these, drained water through it and then watered one of the pots once with this water. The plants grew and thrived from that time, even surpassing the plants that had been supplied with nitrogen at the start and thereafter supplied with distilled water.

Now, on analysis it was clearly shown that these plants had obtained from some mysterious source a great store of nitrogen. It must be from the air. How could it be? Our experimentors saw everything. They noted on the roots of the thrifty plants small tubercles. On dissecting these they found them full of bacteria. Now, don't ask me what bacteria are. I don't know, except that they are about the lowest form of microscopic life, and almost indispensable to higher organisms either animal or vegetable. Well, those bacteria preyed upon the roots of the legumes, and in some way we do not know how, helped them to assimilate the free nitrogen of the air? This was a glorious discovery. I know of nothing more valuable in agricultural science.

Now, no one thinks of disputing that legumes can get their nitrogen from the air. And in their roots they leave a large part of it in the soil, even though the tops are cut and removed from the field.

Why can't they get their potash and phosphoric acid from the same source? Because they are not there. No, if your soil is deficient in these elements you need not expect to bring it up very fast with legumes. But you can add these very much cheaper than you can nitrogen, which is the most costly of the elements of plant food.

Are legumes the only plants capable of drawing nitrogen from the air? No. I think, however, no plant has been found capable of using it to any such an extent as they do. Most of our cultivated plants are exhausters, seeking out and appropriating to their use the plant food already stored up, and their continued culture means sure soil depletion and final exhaustion. It is by the process of rotation with leguminous crops that this soil depletion is checked, nitrogen is gathered and fertility is maintained.

Did you ever think that nature has her rotation of plants? Observe a pasture. One year you will see no white clover worth mentioning. It is all grown up with the grasses. These deplete the surface soil somewhat of its nitrogen, and next year the clover comes in. The pasture seems to be nearly all white clover. It is filled again with nitrogen. The succeeding year the grass takes it again, and so it goes on shifting back and forth, from clover to grass, and from grass to clover.

Sir J. B. Lawes made many very interesting experiments with various kinds of manures on permanent meadow and pasture land. Briefly, he found that the effect of mineral manures, potash and phosphoric acid was to cause the plat to be overrun with legumes, chiefly the perennial red clover, as we call it Mammoth clover, while the addition of a superabundance of nitrogen caused the retirement of the clovers and the advance of rank growths of grasses.

But do the legumes, then, add only nitrogen to our soils? Really, that is all. Practically, they add much more. Their deep growing roots find the potash and phosphoric acid that have leached down below the reach of corn roots and bring it to the surface, where it is stored in the roots and stems. Remember, though, that there is no such hungry plant for these two elements of plant food as the legumes, and were you to remove the entire crop year by year there could be no surer plan of completely exhausting our soils.

Clovers help immensely in the drainage of soils by the decay of their deeply penetrating roots, leaving tiny shafts, down which the surplus water can quickly drain.

Then the shade and covering of the ground is an immense help to it. There are some reasons for thinking that the mere covering of land with a stone, or board, to produce darkness, favors the gathering of

nitrogen. I confess I am not very sanguine of that theory, yet there is probably a grain of truth in it. Certainly, we know that a dense growth of clover helps the mechanical condition of the soil immensely, making it friable and mellow and easily cultivated. The same is true of the use of other legumes, cow peas, for instance.

How shall we use our legumes? Shall we let the entire growth lie on the ground and decay? Yes, if enrichment of the soil with the least possible trouble is desired. For potato growers like Mr. Terry and some truck farmers, it may be the best way. But it seems to me to be a very wasteful way.

If the forage is cut and cured and fed to animals it may be made to return as large a cash profit from that acre as from any on the farm. Then as even under the most favorable conditions, the animals cannot appropriate more than about 20 per cent. of the food consumed, and there is no loss from being eaten, all being recovered in gain of weight of the animal fed, or in the manure pile, we have left 80 per cent. of the fertilizing value of our legume, which, if we care to, we can draw back to the fields and put where it is most needed. Fortunately, also, there is a very large per cent. of the plant food deposited in the roots of the legumes. These we cannot remove if we would. They must remain to improve the subsequent crop.

Now, let us take up some of the legumes in detail. We will begin with red clover, *Trifolium Pretense*. The history of this plant goes back to the time of the Romans, over 2,000 years ago, by whom it was prized. Yet it "can hardly be said to have been cultivated even in the simplest way, till used in England about 1633. This was nearly a hundred years before the cultivation of any true grasses except perennial rye grass.

Let us begin with the seed. It is important that it be pure. This is only a question of care in cleaning, for nearly, or quite, all weed seeds can be taken out with the fanning mills. To sow weed infested clover seed is indefensible. The seed of Mammoth clover is sometimes used to adulterate the common red clover. This is a grievous wrong, for which I know of no remedy except honesty, and that is sometimes difficult to apply at the proper place.

There is no cast-iron rule for sowing clover. In general, I find it best to sow on clayey land early in March, choosing a day when the wind does not blow, and when the ground is frozen, or on a slight snow. (In the South the early fall months are the best time for sowing clover.—Ed.) On black soil I once sowed at the same time, but failure has so often come from the seed being coaxed into growth by a few warm days in March, and then being heaved out and killed by later freezes, that I have learned to wait until the first week of April to sow on such land.

It is much safer, even on well drained black soils.

After sowing I let it alone till the next spring, unless late in August I may pasture it lightly with sheep or lambs. I do not care to mow down the stubble, for a reason that you may think curious, I want to cut the clover for hay the next year. I never sell clover hay. If I did I would no doubt want it free from stubble.

Did you ever think about the ripening of grains or fruits, as compared with the ripening of hay? In ripening of grain the nutritive elements that the plant has been slowly gathering together are deposited and chemical changes no doubt are taking place, too, so that the riper the grain or fruit becomes the more nutritious and valuable it becomes.

Now, no such analogous process goes on with the stalk, the stem and leaves of the plant. The more it is ripened the more it has parted with its precious protein, the more indigestible wooden fiber it contains and the more valueless it is. Yet, many very sensible men will say: "I want my hay well ripened." "I will wait for it to ripen a little." I think it is far wiser to begin cutting clover too green than to wait until it is in its prime, and then finish up by cutting a lot that is too ripe. For in the first place there is no loss of bulk or weight of hay in cutting early, the second crop having so much more time to develop and getting its start before the drouths set in. I admit this is not true of timothy. It is even more true of lucerne, of which we will speak presently, than it is of red clover.

When is clover in its prime? When it is in full flower, before any of the heads have turned brown. It is then worth more, pound for pound, in feeding value than corn. It is worth more than wheat bran. Analysis shows this, and practical experiments prove it. Why use so much grain when we can so much more easily produce perfect clover hay? If the clover is let get ripe, then it has lost much value, according to chemical analysis, and more as shown by what we might call stomach analysis of our animals. There is small loss from cutting too early. So I earnestly advise beginning haying before the clover heads are all out, to avoid prolonging it past the time of full maturity. On Woodside Farm we commonly make about 100 tons of hay each summer, and hurry it as we will we cannot avoid letting the last of it get too ripe. In the winter we regret it. Last season we began on June the 4th, cutting lucerne. On the 8th we were busy in the clover. July 5th found us yet working in clover, there having been interruptions by storm and wheat cutting. On July 5th the lucerne had to be cut again. We finished up by cutting timothy. I do not remember how late it was.

Now, for the wheat stubble, which we left in the clover. I find it a great help toward saving the hay. Nor does it worry me to have it in the hay. In the winter it all assists in bedding the sheep, and is no serious disadvantage to me in any way. It may be different on other farms and with different farm practices.

Now, I do not want to say much about hay making here, for this essay is already becoming long, but in general I find that hay may be put in the barn quite green if only it is the internal juice of the plant that makes it green and there is no moisture caused by dew or rain. Then I know that it is a good plan to sprinkle salt all through the hay as it goes into the mow. It no doubt helps to preserve the hay and adds greatly to the palatability of it, obviating the necessity of salting the stock in winter. We use about half a bushel to the load on the average. I am sure that it is a good plan.

What are the objections to this early cutting of hay? It does not last as long as ripe hay. Oh, no, not nearly so long. But straw will last longer in the mangers than either. It is not economical to sell. Ripened hay weighs better, no doubt. My father taught me years ago that he could keep young cattle growing and thickening finely on early cut hay alone. He did so year after year. On a Western ranch with which I was connected we used to fatten 75 head of three-year-old cattle each spring on richly cured, early cut lucerne or alfalfa hay. J. E. W.

(To be Continued.)

SWEET CLOVER.

While visiting Director A. L. Martin, of the Pennsylvania Institutes, at his farm in Lawrence county last week, my attention was called to some calves that were reaching through a woven wire fence to graze a sweet clover plant that had been set near the fence by Mr. Martin. The liking for this plant, just as with peas and many other sorts of the pulse family, must be acquired by animals before they will eat it readily, but it is a valued forage plant in some sections of the country—a fact to which the Ohio Station called attention eight years ago. Mr. Martin is interesting a number of progressive Pennsylvanians in sweet clover, wishing to have its value both as a forage and a fertilizing plant determined by farm experiments. He makes no claims for it, but he is hopeful that the tests will show that we have been overlooking a plant of considerable agricultural worth.

Director Thorne, of the Ohio Station, called attention to the luxuriant growth of this legume on barren land twenty years ago, and the station, when located at Columbus, grew it on a patch of barren ground, but there has been difficulty in getting a stand on the better land at Wooster. This failure is now believed to have been due to the acidity of the soil, and with liming Director Thorne expects now to succeed.—*National Stockman*.

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WORK FOR THE MONTH.

The gathering, shipping and storing of the products of the garden, orchard and vineyard is work which will call for attention during this month, as will also the sowing of seed and setting out of plants of various kinds for the late fall and early winter crops. Much loss is sustained by careless gathering and shipping of products of all kinds. Want of judgment in selecting the proper time at which to gather products is largely to blame for this, and to this must be added want of care in grading and culling before shipping or storing. Vegetables should be cut before the heat of the sun has caused them to wilt and become heated, and should be at once placed under cover in a cool shed to cool off before being packed for the market. They should always be shipped in well ventilated crates or barrels, and all waste leaves and trash be pulled off. Fruit of all kinds should be gathered carefully and not be shaken or knocked off the trees, and care should be taken not to wait too long before commencing to pick. When fruit is overripe before being picked it bruises easily, and then at once commences to decay. As picked the fruit should be placed under cover in a cool shed to cool off before being shipped or stored. Carefully cull and grade the fruit and send only the best products to market. Keep the culls at home unless they amount in quantity to much more than can be quickly consumed, in which case they should be shipped in separate packages and be distinctly marked as seconds or culls, as the case may be. The less of this class of products put on the market the better, as they largely tend to break down prices for the best products.

Celery plants should now be set out where they are to grow to maturity. Celery requires a rich, light, moist, loamy soil to make the best growth, and if it can be set where it can be irrigated it will be wise to select that situation. It is practically almost impossible to make land too rich for celery growing, yet still the use of freshly made farm or stable manure is not advisable. Half rotted stable and cow pen manure supplemented with a heavy application of a fertilizer analyzing about 7 per cent. of ammonia, 5 per cent. of phosphoric acid, and 8 per cent. potash, will make an excellent fertilizer for the crop. Such a fertilizer can be made by mixing 250 pounds of nitrate of soda, 600 pounds of dried blood, 850 pounds of acid phosphate, and 300 pounds of muriate of potash to make a ton. Apply at the rate of 1,000 pounds to the acre if used alone or 500 pounds

to the acre if used in conjunction with farm pen or stable manure. Mix the manure and fertilizer well into the soil, and lay this off in beds five feet wide, keeping them flat. If more than one bed is required there should be a space of eight feet left between each bed to provide soil for earthing up the plants. The plants should be set out in rows across the beds one foot apart, with eleven plants in each row, thus making them six inches apart in the row. After the plants are all set out keep the beds well cultivated and free from weeds, and see that the plants do not suffer for want of water. Never cultivate or handle the plants when wet with dew or rain, or they will rust. As the plants grow the outer leaves have a tendency to spread out on the ground. This should be prevented by putting earth enough around each plant to keep the leaves upright, but use no more than is necessary for this purpose, as the earthing up of the crop to blanch it should not be done until it has practically completed its growth, say in October or November.

Seed for raising fall cabbage should be sown in a moist situation on rich land and the plants should be pushed on as fast as possible by the use of top dressings of nitrate of soda, so that they may outgrow the worms and flies. Flat Dutch and Savoy are good varieties to raise. The plants should be ready to set out in September.

Broccoli plants should be set out. These make heads like cauliflower, to cut in October and November. They require the same treatment as cabbages.

Sowings of English peas and snap beans may be made in the Eastern sections of the Southern States. These crops are uncertain in yield, as they are frequently cut down by frosts just when ready to begin bearing, but if this does not happen they make crops always acceptable at home and eagerly bought on the market.

Land should be got ready for the fall setting of strawberry plants. Encourage the germination of weed seeds by frequent cultivation, and then fertilize the land liberally with a fertilizer having a good percentage of potash, say 5 or 6 per cent., and lay off in rows three feet apart. Next month will be early enough to set out the plants, as it is not desired that they make more than a good start in growth before the winter.

Live Stock and Dairy.

TEXAS FEVER IN CATTLE.

We have recently had reports of several outbreaks of Texas fever among the herds of this State, and of serious losses of cattle therefrom. One would think that after all we have written on this subject that farmers would ere this have realized how important it is for them to understand the cause of these outbreaks, and how to avoid them. Wherever there are ticks of one particular kind, and *only one, the American Texas fever tick*, these outbreaks of the fever will occur, and cattle will die. There are four other kinds of ticks to be found on cattle in the South often in large numbers, but not one of these, although almost exactly like the Texas fever tick in appearance, will cause the fever in cattle. Every farmer ought to learn how to distinguish these ticks and how to get rid of the dangerous one. He can do this by studying the bulletins issued, and what we have written on the subject, and will be especially benefited if he will send to the Tennessee Experiment Station for the last bulletin issued on the subject, "Texas Fever Cattle Tick; Pasture Method of Eradication." He will there learn how he can easily clean his farm of these dangerous ticks, and thus keep his cattle healthy. If he will, after he has cleaned his farm of the ticks, avoid buying and bringing cattle on to his place from anywhere south of the quarantine line he need never lose another cow from the fever, which is locally known in many sections of the State as Murrian. We had intended to publish extracts from this bulletin, but lack of space prevents this at this time, but we will do so later. Clean the pastures as advised in this bulletin and insist upon a "no fence" law in operation everywhere, and this State can soon get out of quarantine and cattle fever be unknown here.

CAN QUITE NARROW RATIONS BE FED WITHOUT INJURY TO CATTLE AND SHEEP?

Editor Southern Planter:

Agricultural scientists are trying to teach farmers to feed balanced rations; or, in other words, right proportion of protein, carbohydrates and fat to their working, growing and fattening animals. It has been proved times and again that all animals are better fed or nourished when a fair quantity of pro-

tein is contained in their food, foods rich in protein are in most cases the most costly and are in consequence avoided, and rations of wide ratio, rich in carbohydrates prevail. Will animals thrive as well on a narrow ration, one high in protein, as they will on a well balanced one? and how narrow could the ration be made without injury to the animals fed on it? Green alfalfa has the narrow ration of 1 to 3.5, and animals thrive well upon it, red clover has about the same ration, and is a very fattening food; if cotton seed meal, with its 1 to 1.5 ration, be added and so make the ration still narrower, could cattle or sheep eat such a ration without disturbing their digestion, stimulating them too much, or in other ways causing injuries. Valuing protein and fat at 3 cents per pound, and carbohydrates at five-eighths of a cent, cotton seed meal is the cheapest food on the market for its feeding value alone, the manure resulting from the feeding would be very rich in nitrogen, worth three or four times as much as that produced from corn or any of the cereal grains, and this matter of the different manure values of food is not often considered sufficiently when feeding farm animals. Your views on these questions, Mr. Editor, would, I feel sure, be highly appreciated by many farmers who wish to feed not only for the direct but also for the indirect profit in the rich manure resulting from using highly nitrogenous foods. FOSTER CLARKE.

Mercer Co., W. Va.

The points raised in the foregoing are of great importance to feeders of animals, and do not usually receive the attention they deserve. Far too many of our feeders and raisers of stock are content to feed the most easily procured and cheapest feeds without regard to the point as to whether they are thereby securing the best possible results. If stock owners would read and study Prof. Henry's great work on "Feeds and Feeding" we are satisfied that they would in many cases very widely change their methods of feeding and reap thereby much better returns on the feed. As the result of many experiments conducted here in England and in Germany it has been clearly demonstrated that the best results are obtained when the ration fed contains a sufficient supply of protein, with a large proportion of carbohydrates to protein (that is, a wide nutritive ration). Supplying a small amount of protein with a large amount of carbohydrates usually gives a poor gain, a medium quantity

of protein with a liberal supply of carbohydrates usually causes a greater consumption of protein in the body, and a larger percentage of digested protein, where the digestible carbohydrates are greatly in excess of the quantity of protein present poor results are generally obtained. These general conclusions, however, are in all cases more or less varied by the idiosyncrasy of the individual animals, and the particular purpose for which they are being used. Working oxen must of necessity require more protein in the food than those simply resting and slowly feeding or barely maintaining their condition. The production of milk and butter calls also for more protein in the feed than simply the production of flesh and fat. Milk and butter production seems to be largely the result of nervous action, and calls for protein to maintain this nerve force. Our own conclusion, as the result of practical work in feeding cattle, both for beef making and for the production of milk and butter, is that it is very difficult for a feeder to continue the feeding of a very narrow ration for any continued length of time without deranging the digestion of the animals and throwing them off their feed, a result always attended with loss and often very difficult to overcome. We have experienced this difficulty when feeding cotton seed meal in excess and also when feeding clover hay in excess for a lengthened time. Whilst both these feeds are most valuable ones used with discretion, they should not nor should any other rich protein feeds be used extravagantly. As Prof. Henry well says in his work, "The importance of the high value of carbohydrates in the formation of flesh is evident. Feeds containing much fat are comparatively costly are difficult of digestion by herbivorous animals, and an undue amount of them may prove injurious." We should be glad to have this subject further discussed by some of our practical feeders and scientific men. We should especially be glad if Profs. Soule and Fain, of the Virginia Experiment Station, who have had large experience in stock feeding, and who are now conducting a series of most important experiments with cattle at Blacksburg, would give us their views on the points raised by our correspondent.—Ed.

MORE ABOUT THE CREAMERY SYSTEM.

Editor Southern Planter:

Some writers in the farm papers have told about "creamery sharks," with a magnetic presence, and oily tongues, who go about in the dairy regions and persuade the farmers to organize a company and

build a creamery, and let the smooth tongued promoter have the job of putting up the building and supplying it with the engine, churns and necessary fixtures. His pleasing personality and specious arguments are successful in inducing the farmers to build a co-operative creamery and let the eloquent promoter have the job. After it is built and equipped and the stranger has departed, their eyes are unsealed, and too late, they discover that they have paid twice as much for their creamery as they should. In the language of Dr. Franklin, "have paid too dear for the whistle."

This need not have been. It is usually advisable to let the contract of putting up buildings to professional builders, and it is the privilege of the proprietors to previously inform themselves of the necessary cost and advertise for sealed proposals from builders. There is no need of wide-awake farmers being overreached and robbed by "creamery sharks."

The writer visited a successful co-operative creamery in the State of New York. It was carried on by a superintendent and assistants. The cream was usually churned and the skim milk made into cheese which was sold for what it was—skim cheese. There was one room in the building finished off for the monthly meeting of the directors, and the payment of the patrons. In one thing they had been disappointed. After taking counsel, they had bought the land on which there was a mill pond in order to secure an abundant supply of ice. It was known to them that the grist mill, situated below, had a contract with the previous owners for the use of the water, but it was believed that the owners of the pond could hold the ice. In this they were mistaken. The decision of the court was that the ice being composed of the water, must go with the water. It seemed a great hardship for the owners to have to buy the ice from their own pond. A creamery could not be established in a neighborhood and successfully conducted without the certainty of having the milk from at least 400 cows, and the milk from 800 would be better.

In some places no one will risk building a creamery without a contract for the milk of 400 cows, but farmers can reserve the milk of one cow for family use.

The following statement was made by S. W. Lester, of the creamery at Troy, Pa.: "We don't compel our customers to furnish a certain amount of milk, from a certain number of cows; we pay for the cream for the amount of butter it will make within four cents per pound. We do not buy cream by the gauge, but allow the dairyman for just what butter

his cream will make. Twenty and a half pounds of milk will usually make a pound of butter. Our standard dairies netted their owners last year from \$40 to \$50 per cow for the butter, and the milk was left on the farm sweet, for raising calves and hogs."

The following "propositions" were made to the patrons of a creamery at Wyalusing, Pa., by the proprietor: "I will give patrons within four cents per pound of the highest New York quotations for creamery butter made from cream furnished by patrons and delivered at my creamery. The cream to be measured by the spaces marked on the glass panels in the sides of the cans, and a correct account kept and furnished with the cream. We will determine the amount of butter made from each patron's cream by a system of test churnings, whereby we churn each patron's cream by itself as often as it is necessary to determine the correct amount of butter in a given number of spaces." In other words, for four cents per pound, he would churn the farmer's cream, salt, work, furnish packages, pack, ship, pay expense of transportation and selling, and guarantee to get the highest New York price for creamery butter. Is that any too much for the amount of labor, expense and risk?

Many farmers who live near the numerous creameries which have been established along the Lehigh Valley Railroad, are now selling their milk instead of the cream, and the milk must be delivered at an exact hour every day, including Sundays. They get considerably more money by selling their whole milk instead of the cream only, but are thereby debarred from raising calves and pigs, and are exhausting much more of the fertility of their farms. Those who live farther from the station and sell only their cream need not deliver it so often, nor be so exact in point of time.

J. W. INGHAM.

IMPORTED STOCK FOR VIRGINIA.

Editor Southern Planter:

I am advised by my London agents that the third importation of live stock for "Morven Park" left Liverpool July 8th. This time Guernsey heifers and Dorset rams and ewes are coming to me. Mr. Flower writes: "I will send you my best, and all picked from twin ewes, and sired by my best rams—in fact, they are just going to the ram, so will lamb down about 15th of November. I have just returned from the Royal Counties Show, where I won first championship for shearling ewes, first and second for ram lambs, and first for ewe lambs. I also won first prize for best five ram lambs at our annual ram lamb

sale, in a class of 230 lambs. I am going to the Royal next week, where I think I shall be at the top," and he was. The British papers report his success in the principal classes at the Royal of 1905.

While these importations are, of course, made for the general purposes of my property here, I hope they may to some extent at least serve to improve the stock of the old State.

WESTMORELAND DAVIS.

Loudoun Co., Va.

THE IMPROVED YORKSHIRE HOG.

Editor Southern Planter:

So many enquiries have come to "Morven Park" as to just what are the chief points of merit of the large white Yorkshire pig now more commonly known in this country as the "Improved Yorkshire," that it seems to me that I cannot do better than give, through your valuable columns, a short account of the breed and what I consider are among its claims to the support of the Southern farmer.

Though, comparatively speaking, new to the South, this is the oldest, perhaps, of the English breeds of which one of the leading English writers, James Long, in his work on the swine industry, says: "There is no doubt that the large white breed has contributed more to the popularity of English pigs than any other, for it is largely sought by Continental as well as by home breeders for improvement of local varieties. It has, moreover, if we consider its quality as well as its size, been the most useful of any race, and its wonderful improvement has largely contributed to the present high position which the pig holds as a domestic animal."

It must be borne in mind that the Yorkshire is distinctly a lean making—a bacon—pig as contradistinguished from the lard hog, and it remains to be seen which variety is best suited to the needs of the farmer in connection with the tendency of the market. There is no doubt that the public demand in beef as well as in mutton is for a higher quality than has hitherto flooded the Western market. The new era is upon us, and is foreshadowed by the guarded statements of the "Indiana Farmer," in a recent issue:

Writing on "The American Hog," the Indiana Farmer quotes from a bulletin just issued by the Department of Agriculture to the effect that about two-fifths of the world's "hog" supply are produced in the United States, adding these remarks about the type of pig general in that country: "The fat or lard hog is such because corn has been his principal feed, because there has been a demand for pork from such a hog, and he will conform to the present prevailing

type just as long as corn remains the principal feed. Butcher hogs are the best hogs from the fat or lard hog standpoint that come to market, and should be used as a standard for comparison. From the bacon market standpoint the English bacon hog is the ideal toward which hogs are being developed. To the close observer it is apparent that the gradually changing conditions brought about the development of the United States, and the increase in the price of corn resulting from its varied commercial uses, cause the hog to be fed a more mixed and usually a more nitrogenous ration. This will in the future affect the type of the hog of the United States, so that it will more nearly approach that of the English bacon hog."

In Canada and in the great packing centres of the West, the Yorkshire pig is making rapid and magnificent strides in public favor, and the South, hoping for the time when a vast sum of money will be retained at home by the production of its own pork and the sale of its surplus, should be keenly alive to the merits of the various breeds of swine.

As to type: The Yorkshire pig is white in color, fine in the skin, long in body, with deep sides and "meaty" to the hock. The sows as a rule are prolific, good mothers, and gentle. The pigs are active and thrifty, easily adapt themselves to extremes of climate, and are developed for market at a minimum cost.

I have noted in your columns what seemed to be a lack of appreciation of this breed. For instance, the adaptability of the white pig to the South as compared to the black from a climatic standpoint, has to the disadvantage of the white pig been likened to the greater suitability of the black man to the South than of the white man. Just how this point was made I cannot see, for save in equatorial Africa, and now even there, the white man prospers and progresses, whilst the negro, even physically, is being supplanted; and so flourishes the white pig, for any one who reads the English agricultural papers can readily see his periodical exportation to, on the one hand, Northern Russia, and to Denmark, where he goes to make the most prized of hams, as well as to Australia and Africa, where his mission is to improve the stock of the country.

Again, last fall reference was made by one of your correspondents with much unction to the fact that at the sale of Mr. Arthur Hiscock's pigs in England, the average price of the black pig was twice that of the Yorkshire. The manifest purpose of this statement was to show the marked superiority of the black pig, and yet, I venture to say that no mention will be made of the fact that at the recent sale of Mr.

Besent's pigs in Dorset, England, where both breeds were represented, the situation was exactly reversed, as I gather from the British papers, and the average price of the white pig was very much greater, if not twice as great as that of the black, with, strange as it may seem, the same Mr. Arthur Hiscock, the chief and highest bidder upon the Yorkshire pigs.

Price paid is frequently but a fool's estimate of a thing's value. However, since repeated reference has been made to the sales of individuals of other breeds it may be noted that recently Mr. Sanders Spencer sold a pig in England for \$500, and that similar sales have been made from time to time by Mr. Duckering and others.

Although the Yorkshire is known in England as the tenant farmer's pig, he is not lacking for sponsors in gentle and noble circles, for he numbers among his patrons and breeders besides Sanders Spencer & Son and Mr. Hiscock, the following among the nobility who take great pride in their piggeries: the Earl of Ellesmere, the Earl of Roseberry, the Marquis of Salisbury, Sir Gilbert Greenall, and a host of similarly respected names.

If in a humble way I may offer my testimony, I may add that two years ago I went to England that I might study conditions there and compare them with what I conceived to be the needs of the South so far as breeds of cattle, sheep and swine were concerned. I went untrammelled, and there existed no reason why I should not adopt those breeds that appealed to my best judgment. I knew little, if anything of the Yorkshire pig, and only turned to it through what seemed to me to be the natural logic of events, that I might adopt the coming pig rather than secure a type of hog which to meet the demands of the future would have by a long process of breeding and selection to be changed from a lard to a bacon pig.

To my mind all pure breeds are good, and it seems to me that the lesson that must be learned in order to rehabilitate the South is the keeping of stock, and so far as may be, the keeping of the pure breeds. At any rate, whether it be for beef or for dairy purposes, whether it be for the raising of sheep or swine, a pure bred sire should head every herd and every flock, with one question remaining for individual judgment: *Which breed bids fairest to produce the greatest value at a minimum cost*; and in the consideration of this question it would be well, in my opinion, for the Southern farmer to fully investigate the merits of the large white Yorkshire.

WESTMORELAND DAVIS.

Loudoun Co., Va.

SHEEP HUSBANDRY IN THE SOUTH.

Editor Southern Planter:

It is common to hear people say: "Sheep won't do well in the South." "It is too hot for heavy woolled sheep." "Sheep won't do well unless one has abundance of range so as to change them often to fresh pasture." "Sheep with light fleeces do best in the hot South." "Boss, dem fine sheep'll all die wif de moon eye in August." "Sheep do well enough for a year or two, and then take the rot and die." "The South is not the place to raise wool, but mutton, because of the warm winters." "Mutton can be made cheaper than in the North, especially 'spring lamb.'" (The sheep husbandry development of the West has completely revolutionized the mutton market of the United States, which, of old, was patterned after the English markets. The vast majority of "spring lamb" now consumed is off lambs stall fed, seven to eleven months old lambs, which command as high prices, and in instances of the best, even the extreme high prices paid for the famous three month old "spring lambs.") I maintain that the South can produce these as cheap as the North and West can possibly produce them.) "Fine wool sheep take 'the paper skin' and die in the late winter and spring months in the South."

All these observations and more of similar character have become quite familiar to my ears in the last five years, but being a "sheep man" from the cradle up till now, and having had experience in the business both East and West, and with my knowledge of natural Southern conditions, I can say that I do not believe a word of it. With some friends I went right into the business with heavy, fine wool Merino sheep brought from Illinois over three years ago here in Iredell county, N. C. This is down below the mountain foot-hills in the cotton raising parts of the Piedmont region. This flock originally 200 ewes and three stock rams, all first class, registered stock, ewes weighing 75 to 110 pounds, and shearing 10 pounds in very common condition, and rams weighing 200 pounds, and shearing 30 to 39 pounds, kept in high condition. Several ewes clipped 18 pounds in high condition.

These sheep were put on farms not prepared for them more than other cotton and wheat growing farms of the South, and want of fencing has been an expensive inconvenience. I can only say that in the last three years these flocks have met about every adverse and favorable condition that could be met by flocks so introduced anywhere in the South, except overflowing on tidewater lands. My flock this summer is being pastured on low bottom land, but yarded

every night on upland at a barn, and they are doing extra well. Most of the first year they had no shelter, and braved both hard rains and cold storms, but the last two years they had house shelter from both. It is best for good flocks of sheep to have this housing available all the time. Blooded sheep will pay extra profits for such attention and expense, and some wheat, bran and meal given every day in summer, will keep the fleece up to an even growth, in crimp, strength, length of staple and weight, while the body is kept in fine, thriving condition, which enables the sheep to ward off about all parasitic attacks and these in different forms constitute over four-fifths of the enemy to sheep husbandry. An ounce of prevention is worth five pounds of cure.

With small exceptions, our flocks have not had the benefit of tame grass—clover, timothy, red top, pea vines, etc.—pasture, but have had some rye pasture in winter and spring. We have not one-fourth enough winter grass pasture because we find that with plenty of rye or winter oat pasture, which will grow up so rank and abundant in the fall if early sown (in August), and well fertilized, the problem of winter feed for sheep is more than half solved. That is a great saving in the business. We have learned that pea vine hay well cured (never feed mouldy hay or fodder, unless you want a fight with internal worms) fodder corn (planted late and grown for the fodder, not the corn), cut green and well cured, and fed whole without shredding are the best "roughness" perhaps that the South can supply in its present condition. My reason for saying this is, because these crops are prime winter food for sheep, and they can be easily and cheaply produced anywhere in the South; just as we have been doing. We have fed corn, cotton seed and cotton seed meal, hulls, oats and peas; all are good. A well balanced grain ration made up from these and fed, say one-fourth pound per head per day during the summer months, and even one pound per day during the winter months, or say about 150 pounds per head per year for 100 or 150 pounds sheep, fed with the roughness and winter grazing above referred to, will be ample food for each sheep per annum.

Any practical farmer or planter in the South can figure out, and he will find that rich food and feeding can be done by him at less cost than \$2 per head of sheep. He can easily keep eight sheep on what it costs him to keep one steer. The largest Merino sheep full grown and kept in above noted condition should shear 15 pounds, but we will say 12 pounds, of wool for young and old in high condition, which, at present prices—25 cents per pound, \$3 per head,

or 33 per cent. more than the cost of keeping, in wool alone; then counting the increase at 70 per cent. of lambs raised, makes this sheep business an unrivaled industrial pursuit. However, cut this nearly in two, leaving 40 per cent. increase on the investment and what business in the South will equal it?

Part of our stock here that were highly kept and fortunate, fully equalled the above maximum estimate, while the part unfortunate and making the lowest results does not fall so low as the above minimum estimate of profits. This, too, while it is readily seen that the land on which the sheep are kept is improving. I look out from my window on a field of cotton, into the deep furrows of which my hands helped to strew along sheep manure with shovels, then a light cover of dirt, then 200 pounds, mostly phosphate, to the acre, then covered, and the cotton seed planted in this bed in rows three feet apart, and thinned to one plant in every 14 inches. I tell you it would please a Mississippian to see the way those cotton plants grow and are bolling (July 4th). This is one adjunct to our sheep business here, and I claim it will double the former yield of cotton on this land, and yet leave the land permanently richer than it was. *See if I do not prove it by my work as well as talk.*

A recent letter from a friend in Ohio states that he has just sold about 1,500 fleeces of wool, averaging 11 pounds, at 30 cents per pound. His is an extra breeding flock of Delaine Merinos, kept up to the top notch in breeding and condition. I believe such results can be had in the South with extra keep given to an extra flock of large, fine wool Merino sheep. Another friend in North Carolina writes me that a ram lamb purchased of me last fall clipped 19 pounds of wool, that he sold for 26 cents per pound. Another writes that his lambs, a cross from one of our Merinos on his Southdowns two years ago, are shearing 8 pounds of wool, and that he never had larger nor more healthy young sheep.

There have been several thousand American Delaine and Rambouillet Merino sheep in the North offered to us here, and I wish all of them could be brought South. We will try to get some of them here this fall.

SAMUEL ARCHER.

Iredell Co., N. C.

(We should be glad if our friend would give us his reasons for preferring the Merino type of sheep to the Down breeds for the South.—ED.)

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.

COTTON SEED MEAL,

Editor Southern Planter:

Although cotton seed meal has been fed with success, particularly to cattle, for many years, there is still a good deal of prejudice against its use in many parts of the country. Nor is this prejudice all found, as one might suppose, in sections remote from its production. Only recently, the writer had occasion to discuss the merits of cotton seed meal with several prominent dairymen here, who seemed to think that it was unsafe as a food for dairy cows. Cotton seed meal has now been used so long as a food stuff that it seems strange that its virtues should not be fully appreciated, and the best methods of feeding it better understood.

In the first place, cotton seed meal is a by-product obtained from the seed of the cotton after the boll has been removed, and the oil expressed. Some oil is, of course, left in the seed, but when handled in the best manner, it does not amount to very much, and it is probable that the small amount of oil left has rather a beneficial than a deleterious effect on the meal as a food stuff.

For years cotton seed was not thought to have any value, and it was commonly thrown out behind the gin house and left to decay. Later it was discovered that it had a high fertilizing value, and it was used considerably for that purpose. As live stock interests developed, and food stuffs became scarce and higher in price, cattle were first fed on seed with some success, but owing to the high per cent. of oil contained, the tendency to scour was very great, and the seed did not come into much favor as a food stuff. Later when the value of the seed for oil was discovered, and a method was found for stripping the seed coats off and expressing the oil, cotton seed hulls and meal began to come into favor for the feeding of beef cattle. This change of sentiment was brought about largely by the fact that cotton seed cake—that is, the meal after the oil was expressed, but before it was reground—was exported in large quantities to Europe, especially to Great Britain, where it had long been in favor as a concentrate for cattle and sheep. This led American farmers, particularly in cotton sections, to the conclusion that they could utilize the meal themselves to advantage, and hence the first efforts made to utilize it as a food stuff in the United States. Naturally, as nothing was known about it, it was not fed judiciously, the only roughness utilized being the hulls. The meal was fed in enormous quantities considering its highly concentrated nature. The amount of hulls fed with each pound of meal varied from 2 to 10, though in

most instances no effort was made at proportion, the meal and hulls being simply shovelled into the troughs at random. Another serious mistake and one often witnessed even now was the endeavor to fatten range cattle in about three months on cotton seed meal and hulls alone, though it often took these animals accustomed to grass alone, a full month to become used to the new food. When they did begin to eat it, they simply gorged themselves, as it was fed to them ad libitum, and as a result, at the end of ninety days, some of the animals often died from what is known as "fat sickness," "staggers," etc. What the real cause of the trouble was, the writer cannot say, though it was probably brought about through acute indigestion brought on because of the unbalanced ration fed, and the inability of the animal to digest for long periods such a highly concentrated and one-sided food. Thus the first efforts to use cotton seed meal for beef cattle were not very satisfactory, but as it could be bought at that period for fifteen dollars a ton, and sometimes for even less, it was much cheaper than corn, and hence other efforts to feed it were made, though for a long time it was believed that cattle could not be fed on cotton seed meal for longer periods than ninety days without danger of fat sickness and death. Later when feeders began to realize that they could obtain the same gains with much smaller amount of meal, about one pound for each five pounds of hulls, the feeding period was gradually lengthened to 120 and in some instances to 150 days, though there was still more or less danger from fat sickness and lameness in the cattle, and they did not stand shipment very well.

These early experiences with beef cattle were repeated with dairy cows, the attempt being made to nourish these highly organized creatures with hulls and meal alone. The results were parallel to those observed in beef cattle. Abortion was occasionally reported, and though of a sporadic nature, and the cause attributed entirely to the feeding of cotton seed meal, yet no scientific evidence has ever been adduced, so far as the writer knows, to establish the claim. Naturally these misfortunes created prejudice against the use of cotton seed meal in the minds of many dairymen, which still crops out now and then in the most unexpected places.

It is not surprising that difficulties should have been experienced in feeding cotton seed meal under the conditions outlined above, and this little bit of history has been written to show the unreasonableness of the charges made against cotton seed meal, for it was not used rationally nor with good judgment. Investigations made in recent years have tended to

correct many wrong impressions concerning this food stuff, and, in fact, it has been clearly shown that when rationally used, it is undoubtedly one of the best and most profitable concentrates that the farmer can purchase. This is evidenced by its composition, for it contains 42.3 per cent. of protein and 13.1 per cent. of fat. This is 9 per cent. more protein and fat, respectively, than is contained in linseed meal. Thus cotton seed meal stands out as the richest concentrate on the market, in large quantities. The mere fact that it contains such a high per cent. of protein and fat explains in the beginning the difficulties in feeding it, which were experienced by feeders a few years ago. No food stuff so very rich in these two constituents should be fed in large quantities—first, for the sake of the animals; second, for economy. Persons who live on very rich and highly concentrated foods are likely to become dyspeptic, and the same is true of live stock, though the application to the animal world is more often lost sight of by feeders who exercise great intelligence along other lines. Animal capacity and the nutrients must always be considered in adapting a ration to the needs of any particular class of stock, and if this had been done, there never would have grown up the prejudice against the use of cotton seed meal, to which reference has already been made.

Cotton seed meal also has another very important value to the farmer, due to the enormous amount of plant food which it contains, and which, of necessity, is largely voided by the animals consuming it. It, therefore, has a double value as a food stuff, and as a fertilizer. While the price of cotton seed meal has increased during recent years, it is still certainly the cheapest concentrate available for the Southern farmer, and for that matter, in any part of the United States, when its food value and fertilizing value are both considered.

These facts pave the way for a discussion of more recent investigations in the feeding of cotton seed meal and the results therefrom. The early attempts to feed the meal with hulls alone could hardly prove satisfactory because it is now clearly realized that a considerable amount of roughness must be fed to farm live stock in order to keep the animals in the best condition, and to secure the largest gains at the least cost. Cotton seed hulls of themselves constitute a very poor roughness, with only one thing to recommend them—namely, their cheapness, but even then a farmer cannot afford to buy cotton seed hulls when he has plenty of corn stover and hay available, and has silos filled with succulent material to feed with the meal. In fact, if other forms of roughness had

been used, particularly those of a succulent nature, the large amounts of meal fed in the earlier years would not have proven so unsatisfactory, though exceedingly wasteful. It is also evident that a food stuff so rich in protein and fat should be fed in conjunction with some material low in these concentrates. For that purpose, there is nothing superior to corn, and corn and cotton seed meal when combined judiciously form an ideal concentrate for beef and dairy cattle. Investigations quite recently made show that a ton of cotton seed meal will produce 500 to 550 or even 600 pounds of beef when fed with silage made from corn and sorghum, and these results were obtained where the cotton seed meal constituted the only concentrate used.

These facts establish the high feeding value of cotton seed meal when judiciously used, and also demonstrate that excellent results will be obtained from it when fed with silage or any other succulent food which is cooling and soothing to the digestive system, and tends to keep the alimentary canal in a healthy condition. The highly concentrated meal when fed alone with dry roughness is a heating food, and it is quite common for farmers to use twice as much for a given gain as is necessary, because it is not as fully digested and assimilated as when fed with food stuffs where its mastication is of necessity slower and more thorough. It has also been established by recent experiments that cotton seed meal can be fed with silage, pea or clover hay for 180 to 200 days without injury to beef cattle. Animals thus fed gained two pounds per head per day and dressed out as high as 63 per cent. of the live weight. Thus silage and cotton seed meal, with pea and clover hay, provide a very economical and satisfactory ration for the production of beef, for the slaughtered animals yielded beef of the very best quality. If the cotton seed meal is combined with a small amount of corn meal, a better finish will be obtained, possibly the gains will be increased slightly, and the animals will doubtless ship long distances and hold their form better than where cotton seed meal alone is used.

These results, while obtained in the South, are believed to be applicable to conditions anywhere in the country, and show, to the entire satisfaction of the writer, that cotton seed meal can be utilized in the making of beef to the very best advantage, and that when used properly it provides a very cheap and satisfactory form of concentrate.

What has been said of beef cattle may be repeated with reference to dairy cattle, though many dairymen even now claim that where they fed a small amount of cotton seed meal, not more than one to two pounds per day, they have all sorts of troubles

in their herd, which disappear immediately on the discontinuing the use of cotton seed meal. This may be true, but observation does not confirm this opinion. It rather seems to the writer that there must be other causes at work than those reported by the dairymen, for there is no reason why cotton seed meal should not be fed at the rate of four or five pounds per day to dairy cows for long periods without any evidence of injury. Cotton seed meal has been fed for years to dairy cows over which the writer has had control, therefore these observations are not theoretical in nature. It is true that some cases of abortion have occurred in these herds, some animals have died from one cause or another, but though competent veterinary service was always at hand, no evidence of any injury from feeding cotton seed meal was ever discovered, nor was the veterinarian of the opinion that any injury resulted from its use. Of course, cotton seed meal if fed in large quantities as the sole concentrate would prove unsatisfactory for dairy cows, but if not more than three to five pounds per day are fed in conjunction with an equal amount of corn and bran, bran alone, or bran and oats, no injury will follow. As a matter of fact, cotton seed meal furnishing such a large amount of protein and of necessity at a very reasonable cost, provides one of the best concentrates for dairy cows; but it will not be satisfactory if used alone, and it will always give the best results when fed with silage or other green foods, and in conjunction with equal amounts of one or two other concentrates, such as corn, oats and bran. Those who make such strenuous objections to the use of cotton seed meal for dairy cows will find on close observation as many reasons for attributing ill health, failure to breed, caked udder, milk fever, and all the ills to which dairy cows are subject, to other causes than the feeding of cotton seed meal, with as much certainty of reaching the truth.

For horses cotton seed meal can be fed at the rate of two pounds per head per day without injury. The writer does not believe it pays to feed cotton seed meal to horses, judging from his own experience, but so far as the injury is concerned, it can be fed with impunity once the animals become accustomed to it.

For sheep, small amounts of cotton seed meal can be fed to advantage. One-half pound per head per day should be the limit, though one-fourth pound will probably be better.

For hogs it has no value, though some writers still maintain that it can be fed in small quantities for a considerable period with some success. Even if it can be used for hogs, all investigations tend to show

that it would need to be used with such skill and care as to make it unsatisfactory. In fact, it has generally been held that where cotton seed meal has been fed in considerable quantities for some time it will kill hogs. This observation has been made and recorded in a number of instances. It has also been claimed by many practical feeders that hogs cannot follow cattle eating considerable quantities of cotton seed meal. Others claim that there is no danger where corn is fed with the cotton seed meal. It is a pretty hard matter to arrive at the truth where there is so much controversy. It is certain that cotton seed meal cannot be fed in any considerable quantities to hogs for long periods with satisfactory results when our present knowledge of the subject is considered. It is still an open question whether they should run after cattle or not, receiving cotton seed meal, though if only a small amount is fed, it is doubtful if any injury will follow.

Thus cotton seed meal when judiciously fed has a remarkable value for the production of beef and for nourishing the dairy cow. For calves under six months of age it is too rich, and so should not be fed even in small quantities. For horses it can be fed with safety, though the results obtained do not seem to justify its use when the cost and economy of other rations are considered. For sheep and lambs a small amount of cotton seed meal will prove satisfactory. For hogs it cannot be utilized with satisfaction.

No doubt some persons who object to the use of cotton seed meal have reached this conclusion because they used an inferior quality. Cotton seed meal should be a bright, golden color; when it is dark it is usually adulterated, and if old, musty or mouldy it should not be fed. Like any other food stuff in that condition it is likely to cause sickness and death, but under those circumstances it is not in a normal condition, and good meal should not be condemned by those who have used an inferior quality through ignorance.

Cotton seed meal, like any other concentrate, should not be used in large quantities at or near the time of parturition. Those who have had trouble with milk fever have often allowed their animals a rich ration of grain right up to the time of calving, and then as milk fever or other ills have followed, they have blamed it on the cotton seed meal when the trouble was due to improper management.

These are some of the facts with regard to the use and value of cotton seed meal, gathered through several years of close observation, and they are fully substantiated by experimental data.

ANDREW M. SOULE.

Virginia Experiment Station.

JERSEYS IN VIRGINIA.

Editor Southern Planter:

It may be of interest to some of the readers of the *SOUTHERN PLANTER* to hear a little about an up-to-date "Jersey Farm." On April 16th last I visited the farm of Major A. R. Venable, which is situated about two miles from Farmville, Va. In the farm, "Millwood," there are, I think, 547 acres. Mr. Venable runs everything he possibly can by steam, including his model dairy. He has two silos of about 100 tons capacity each, from which he feeds to his fine Jersey cattle about 45 pounds of silage per head per day. This is supplemented by cotton seed meal, shorts, corn meal and other protein foods, according to the season. In the fall, winter and spring clover and cow pea hay is added. I purchased from Mr. Venable five pure bred Jersey cows, and needing more, and being well satisfied with my first purchase, I paid another visit on June 14th and purchased three fine pure bred cows—in fact, the whole eight purchased are as fine Jerseys as one would wish to see. On my last visit I had a good opportunity of going over the farm with the Major (who, by the way, is an ideal host), and what caught my eye more than anything else, outside the cattle, was the fine 150 acre pasture, with its clumps of woods, and in the woods most excellent grazing in the shape of Japan clover. Outside the pasture the farm is devoted to corn, wheat, cow peas, corn for ensilage, and clover, then last, but not least, a large vegetable garden, which every farmer should have, be his acreage small or great.

It does the eye good to see the beautiful herds of Jerseys the Major keeps. He is now milking 18 head, and from these gets 45 gallons of 4 1-2 per cent. milk daily. What better does one want. There are also a large number of pure bred heifers, ranging from six months to two years old, that any lover of Jerseys would go into raptures over, some registered and some not, all beauties. There are also three or four young bulls from six to twelve months old from registered stock, the dams in each case being retained in Mr. Venable's herd because of their special excellence.

I would strongly advise any one wishing a pleasant and profitable trip to take a run over to Farmville and go to Millwood Farm.

From a measured gallon of cream from my Jerseys purchased from Major Venable, we produced a little over three pounds of butter. I have to thank you, in a way, for my nice, small herd of Jerseys, because it was through the *SOUTHERN PLANTER* that I first became acquainted with Mr. A. R. Venable.

Dinwiddie Co., Va.

THOS. E. BIRBECK.

The Poultry Yard.

POULTRY NOTES.

Editor Southern Planter:

The moulting season! As every one knows, all fowls shed their coat of feathers during late summer and early fall, and at this time all fowls are not vigorous and seldom lay eggs. Many times they moult very slowly and imperfectly, and as a consequence do not lay until very late in winter. Eggs usually bring best prices during November, December, January and February, and all poultry keepers are especially anxious to get a good egg yield during these months. Early hatched pullets usually lay at this time, but where one has a large flock of hens it is very trying to feed and feed and get no returns.

Many theories and plans have been advocated to hasten the moult and get the hens' winter clothes on and get them down to work before cold weather begins. One such plan was advocated several years ago and tried by many. This was to pull nearly all the feathers out by hand in August, then feed well, and the new coat would soon appear and the hen would be in laying condition by November 1st. Another plan much recommended was to starve the fowls for several weeks, then feed well, and they would fill the egg basket as a grateful thank-offering for their release from a slow and painful death by starvation. Some advise feeding some of the poultry foods and nostrums on the market to hasten the moult. I almost blush when I admit that I have tried all of these methods and others. Sometimes they moulted, sometimes not. Some died trying to moult, and some seemed to have their feathers glued into them, so they had to wear them out. I once owned a Buff Cochon hen that moulted regularly in June. I thought this a very sensible plan, but could not get the style popular.

After many years of experimentation and much vexation I have concluded that it is about as impossible to make a hen moult naturally as it is to make her sit, and if she does not moult naturally it is usually a bad business venture from start to finish. Do any of these ideas look reasonable, sensible? Not to me. What does? Here is what I do. I keep my hens as healthy as I can. Give them plenty of sunshine, air, exercise, fresh water, keep them clean, free from lice and mites, keep the males away from them from July 15th to September 1st, feed all the wheat, oats and bran they will eat, give them an extra allowance of meat and bone, feed no corn. This ration will keep them laying if there is any lay in them, and give them the food element necessary to

make the new feathers. About September 1st begin to feed them some good, sound old corn and a small allowance of sunflower seed, put the males with them and feed all they will eat all the time. By this method I have had yearling hens of the small breeds lay quite well during the greater part of the moulting season, and get into full laying condition by November 1st. Many of our early hatched pullets are laying now. We had a few that commenced to lay in June. These chicks came out of the shell February 4th, and four at least laid several eggs each in June. I am interested to see the outcome. Will they moult this autumn?

I have this question from a friend of the *PLANTER*, "Will it pay to hatch chicks in autumn, say September, October and November?"

It depends. If you have good quarters for them and will give them good care, by good quarters I mean a good roomy house, dry ground, plenty of grass, clover, rye, rape, etc., growing for them to run on during winter; if so, and if you will keep them in small flocks (not over 25 in a brooder and house at night) you can succeed and raise some very good and profitable layers. Some of the very best layers that I have ever owned were hatched in September. These pullets began to lay in March and April, and layed exceedingly well till August, then moulted quickly and layed again in October, and continued throughout the winter. This, too, in a climate much more severe than Southeast Virginia (Northeast Indiana).

We intend to begin hatching about September 1st and continue till June. We will use colony brooders and put 50 chicks in each house, with two 2x2 foot brooders in each house. Will make these colony houses 6x8 feet square, thirty inches high in rear and five feet in front. Will put a muslin door in front 20 inches wide and 42 inches long. This will leave 18 inches at bottom to be boarded up. Will make them out of one-half inch boards and cover sides, ends and roof with some good composition roofing. These colony houses will be built on 2x4 sills rounded up at ends so a horse can be hitched to them and be easily moved about. Will sow five acres of rolling corn land for range for this purpose. Will give plans and photo engravings next month of houses, coops, nests, etc., if possible.

CAL. HUSSELMAN.

Richmond, R. 6.

Just tell them you saw it in the *PLANTER*.

The Horse.

NOTES.

The present season has been a great one for the Virginia Circuit of Horse Shows, as the liveliest sort of interest has been manifested in their welfare, and probably never more generous patronage was accorded these affairs, the first of which took place at Keswick, in May, and was followed up in regular succession by those at Leesburg and Upperville, in June, after which the Culpeper, Fredericksburg, Manassas, Orange and Front Royal shows took place in July. For this month the Charlottesville Show is fixed for the 1st and 2d, and then we are to witness those at Staunton, Harrisonburg, Berryville, and Warrenton. The latter closes the circuit of open air affairs, and not a single show is scheduled for September, but we are promised a royal treat in October, as during that month dates are fixed for the big shows to be held under cover at Lynchburg, Richmond and Norfolk. For Lynchburg the week of October 3d-6th has been assigned, while Richmond, which is the largest and most important of Southern Horse Shows, comes off October 10th-14th, after which the scene shifts to Norfolk during the week of October 16th-21st. Richmond is now associated with the famous National Horse Show of New York, and the great Chicago Horse Show as well, which is something to be proud of and has been widely commented on.



With good horses of every breed and approved type selling readily at prices that represent a liberal profit on the cost of production; in fact, it may be said that oftentimes figures now rule that seem almost prohibitive for animals especially of the fancy sort, it is no wonder that many mares are being bred this season, and that progressive owners with stallions of real class have reaped the harvest. Among the trotting sires in this vicinity that have attracted the attention of breeders may be mentioned Kelly, 2.27; Great Stakes, 2.20; Sir Red, the dead son of Red Wilkes; Lord Chancellor; Alfred Nelson, by Alfred G., and Woolford, 25537, the son of Judge Salisbury and Norma Sprague, by Governor Sprague. The latter has attracted attention, because he is good looking and carries the blood of Gov. Sprague, a factor in the famous trotters Tiverton, 2.04 1-2, and Sweet Marie, 2.04 3-4.



What is described as one of the handsomest and most blood-like trotting bred foals ever dropped in this vicinity is the chestnut filly, foaled July 5th, by Kelly, 2.27, dam Juno Wilkes, 2.29, by Victor Wilkes, 2.17 1-4, and five others in the list, by

Daniel Lambert. This filly has exquisite quality and finish, and should not only trot fast, but be able to last through a race of broken heats. Juno Wilkes and foal are at Andrew Pollard's Dunraven Farm, near this city, and the mare has been bred back to Kelly. They are owned by Capt. W. G. Sills, of the U. S. Army, now in Texas, and it is safe to say that the pair are held at no ordinary price. This filly, like most of the get of Kelly, is both handsome and has fine trotting action, which has attracted many fine mares to the court of the son of Electioneer and famous Esther, who has already served close to eighty mares this season, and others are waiting to be bred to the bay stallion. Two other fine fillies by him are from Florence Miles, 2.21 1-4, and Eliza Ingram, by Norfolk, dam the great brood mare Frosty May, by Joe Downing.



The show horses in the stable of David Dunlop, of Petersburg, Va., have attracted much attention at the different Horse Shows, and well they should, because a higher class lot, taken individually or otherwise, has never been seen in all this Southern country. The stable numbers over 20 head, and represents an expenditure of close to \$150,000 in round numbers. The condition of the horses is highly creditable to Manager James Page. Many of the horses are good enough to meet the best company to be seen in the great show rings of the country. Twelve men are employed by the stable, and three express cars are required to transport the outfit.



Secretary Percival Hicks, of the Southside Agricultural Association, North Mathews county, Va., reports a bright outlook for the annual fair and race meeting to be held there on October 11th, 12th, and 13th. Purses will be offered for trotters, pacers and runners, and as the horse interest is much alive in that section, doubtless the different events will have good fields to score for the word.



W. J. Carter has purchased of Robert Tait, Norfolk, Va., the handsome bay mare, Helice, by Norval, 2.14 3-4, dam Grenada, dam of Drollery, 2.21 1-4, by Onward. Helice is the dam of Clarion, 2.15 1-4. She has been bred to Kelly, 2.27.

BROAD ROCK.

When corresponding with advertisers, say you saw their advertisement in the Southern Planter.

Inquirers' Column.

SHIPPING CREAM—COWS FOR BUTTER AND CREAM.

I am interested, and venture to think others are also, in the editorial answer to the question on "Dairy Farming" by a North Carolina correspondent.

1. Under what condition can cream be shipped (in summer especially), 400 to 500 miles save by special refrigerator direct cars?

2. If Jerseys are the best for the butter trade why may the choice be between them and Holsteins for the cream business, where skimming is done by the separator?

WM. MANN.

1. If cream be cooled down almost to the freezing point before it is shipped and the cans jacketed, there is no difficulty whatever in shipping it 400 or 500 miles by ordinary express. The Virginia Experiment Station last year shipped cream to New Orleans frequently by the express cars and in every case the shipments arrived in good condition. This cream so shipped was partially frozen before being jacketed, but the distance to New Orleans is much greater than cream is ordinarily shipped.

2. The reason that we said that there was a choice between Jerseys and Holsteins for the butter and cream business was because Jersey cream is usually very much richer and more viscous than Holstein cream and therefore better adapted for butter making. The quantity of cream yielded by Holstein milk of a quality sufficiently good to meet the requirements of the cream trade is greater than that which can be gotten from a like number of Jersey cows.—Ed.

COW PEAS—RYE.

1. Will you give me information as to how late I can sow black Cow peas to make seed in paying quantity and also for hay?

2. What do you think of sowing rye in corn and peanut fields in the fall and as to its value to crops?

Dinwiddie Co., Va.

W. L. KOHLER.

1. It is late now to sow peas for seed. Whilst if the fall be a late one, they might mature and ripen seed thoroughly, yet much of it would doubtless be lost. They can still be sown for hay and for an improving crop, but should not be put in later than the middle of this month even for that purpose.

2. The only good purpose served by sowing rye in corn and peanut fields is to provide something to cover the land in the winter and thus conserve the fertility already in the soil. Rye adds nothing to the fertility of the soil except humus and the mineral matter that it takes from it. It you will sow Crimson clover or vetch with the rye or a mixture of rye, wheat and oats, you will get not only a conservator of fertility in the soil, but also a crop that will add to the fertility by the nitrogen which it will obtain from the atmosphere.—Ed.

PLANT FOR NAME.

I enclose herewith a plant which I wish you would name and advise as to whether it is obnoxious. It appeared on my farm about two years ago and came in German clover seed, I think. It spreads very rapidly and covers the ground like moss in the fall.

Caroline Co., Va.

L. C. SMITH.

The plant sent is Knael, *Scleranthus Annuus*. It is an annual or in some instances a biennial and of no economic value. The only way to get rid of it is clean cultivation in the spring and summer.—Ed.

HARVESTING CORN—VETCHES.

I have my corn sowed in peas. I am thinking of cutting the corn off when the fodder is ripe. I think this will give the peas a better chance. I want to plow the pea vines under about the time they mature, using lime on the land at the same time. Part of the land I want to sow in oats and the remainder in vetch for a winter covering crop.

1. Is corn when cut green and put in shock liable to damage?

2. Is there any economy in harvesting a corn crop this way?

3. Should corn be shocked as soon as cut or should it be allowed to wilt a day or so?

4. How long should it stand in the field after being shocked?

5. Do you know anything about the value of vetch as a soil improver?

6. Will vetch grow a crop on land that is too thin to grow Crimson clover?

7. Will vetch do well when sowed as late as October 15th?

B. T. WOOD.

1. Corn may be safely cut and set in shocks as soon as the grain is glazed and dented. Do not make the shocks too large, see that they are kept open in the bottom and they will take no harm, but cure up perfectly.

2. There is great economy in thus harvesting the corn crop. The whole of the crop can be taken from the field at one time and the ears be pulled and shucked in the barn or the whole crop can be put through the husker and shredder and the corn be freed from the husks, and the stalks and blades made into palatable food for stock.

3. Yes. Shock the corn as it is cut. It is no use to allow it to wilt.

4. This depends upon the weather and the degree of maturity of the corn when cut. Let it remain in shock long enough for the fodder to be thoroughly cured and the grain be hard enough and dry enough to go into the corn house.

5. The vetch is one of the most valuable legumes as an improver of the soil that we possess. It gathers more nitrogen per acre than almost any other crop grown.

6. Vetch will grow on thinner land than Crimson clover, but to make a good crop on thin land, should have some help in the way of fertilizer to start it.

7. Yes. We have known a good crop to be made, sown even in November, but it is better to have it in earlier—say September or October.—Ed.

CLOVER AND TIMOTHY—SHEEP.

1. I have a piece of land that has grown fine crops of German clover for several years. Do you think it would grow Red clover and Timothy successfully? And if so what is the proper time to sow and how much seed of each kind should be sown to the acre?

2. My sheep which have been well sheltered and cared for are troubled with a cough. I would be glad if you can give me any information as to the cause of it and some remedy for it? I am in need of a good stock book. Can you give me the name of some reliable stock book and where I shall be able to purchase it?

Sussex Co., Va.

A SUBSCRIBER.

1. Whilst the heavy crops of German clover which your land has been producing for several years will no doubt have enriched it with nitrogen and humus, yet they will largely have exhausted the phosphoric acid and potash. Both of these mineral elements are essential to the growth of Red clover and Timothy. If you will apply 25 bushels

of lime to the acre after plowing the land, work this into it and then previous to sowing the clover and Timothy, apply 300 pounds of acid phosphate to the acre, it is probable that you may get a stand of Red clover and Timothy. These seeds should be sown in August or September. Sow 10 pounds of Red clover with 6 pounds of Timothy to the acre.

2. Seeing that your sheep have been well sheltered and cared for, we are afraid that the cough troubling them is an indication that they are infested with worms in the bronchial tubes, one of the parasites, which is very troublesome among sheep in the South and one which is exceedingly difficult to get rid of. We hesitate to advise you to use the only remedy we know to be effectual, as unless used with great care, you may easily kill the sheep, while endeavoring to cure them. Gasoline mixed in milk is the remedy found effectual for this parasite. About one tablespoonful in a pint of milk is usually administered. Great care must be taken when using it not to let the sheep get it down the windpipe, as it will suffocate them.

3. The best works on diseases of cattle and horses are the two books published by the Department of Agriculture on these two subjects, which can only be obtained through your Congressman or Senator. Stuart's Domestic Sheep is the best work on sheep husbandry and diseases published. We can supply this at \$1.50.—Ed.

LIME—SAWDUST, ETC.

1. Will lime and sawdust make a good compost heap?
2. Is it all right to spread lime on soil that has a considerable amount of vegetation on it? Will want to turn it under in two years.
3. How much lime will a kiln make 19 feet long, 14 feet wide, and 12 feet high?
4. Will Red Top and Timothy come up if drilled?
5. What is an effective remedy for St. John poison?

SUBSCRIBER.

1. The lime without the sawdust will do the land a great deal more good than a mixture of the two. There is no fertilizing value in saw dust. The best thing to do with it is to burn it up and spread the ashes.

2. Lime can always be used with advantage on a soil having plenty of vegetable matter upon it, as it will break down vegetable tissues and reduce the matter into humus, making plant food matter more quickly than any other substance which can be applied.

3. As we have had no practical experience in burning lime, having always purchased it burnt ready from the kiln, we are unable to answer this question, as we do not know what a cubic yard of lime will weigh.

4. Yes, if not drilled in too deeply—say not more than 3 inches deep.

5. We do not know what St. John Poison is and, therefore, cannot prescribe a remedy. We never heard of it before.—Ed.

OX EYE DAISY.

As I have been a reader of the Planter for some time I will ask some of your good farmers how best to rid a farm of "Ox Eye"? It has a bloom like "Dog Fennel," only larger. Will sheep or goats weaken it? It grows right with blue grass sod.

J. D. JOHNSON.

Scott Co., Va.

The only way to get rid of Ox-Eye Daisies is to plow up the land and put it into cultivation. Continue this cultivation for two years. This may then be followed by a

grain crop, sown to clover and grass. Even then it will be necessary to go over the grass and cut out probably a considerable number of the daisies, as soon as they can be seen in the spring. It is one of the most difficult weeds to eradicate that we have, as it seeds so abundantly, thus filling the land with a never-ending succession of plants.—Ed.

INCUBATORS—FEED FOR COLT—ALFALFA.

1. Which is superior, the hot water or the hot air incubators and brooders?

2. The best feed for a weaned colt three months old? Was compelled to wean same.

3. Alfalfa in fall should it be sown alone or with another crop? Also what kind of soil is best suited?

Campbell Co., Va.

C. W. HEK, Jr.

1. This is a matter of opinion about which experts differ. Personally, we prefer hot air incubators and hot water brooders.

2. Oats and bran will make the best feed for your colt with some good clover hay, if your pasture has become eaten down. If the colt will drink milk, let it have a few quarts every day.

3. Alfalfa should always be sown in the South without a nurse crop. Sow it alone. A good loam soil is best suited for growing alfalfa, though we have seen it grown successfully on a clay loam well drained.—Ed.

DEHORNING CALVES—BEE KEEPING.

1. What sort of caustic is used in dehorning calves and how to use it?

2. What can be hung near hives that bees will swarm on?

3. The name and address of a good bee keeper's journal? Bedford Co., Va.

H. S. HUBBARD.

1. Caustic potash is used in dehorning calves. As soon as the button from which the horn springs can be felt on the calf's head, the hair should be clipped from around it and the stick of caustic potash be moistened and rubbed on the place till the skin is burnt slightly. It may be necessary to repeat this once or twice. Usually, if applied early enough, once is sufficient to burn out the root of the horn.

2. We are unable to answer this question. We do not know that bees have any fancy for one thing in preference to another, on which to swarm. We have seen them on all sorts of things.

3. The A, B, C of Bee Keeping, by A. I. Root, published by the A. I. Root Co., Medina, O., is the best book published on bee keeping.—Ed.

PLANT FOR NAME—VALUE AS FEED AND FERTILIZER.

1. What is the name of enclosed plant?

2. Will it make good dry hay?

3. Of what value is it as a fertilizer to plow under?

4. Would it be hard on the soil or exhaust it quickly?

5. Will it grow in the Gulf States as easily as it does in the North?

BACKWARD.

1. The plant enclosed is *Mellilotus alba*, commonly called sweet clover.

2. In some sections it is made into a hay, but not usually in Virginia, as cattle do not appear to like the taste of it and will reject it, if other food can be had. They require to be educated from calfhood to eat it freely.

3. Being a leguminous plant, it is valuable to plow down as a fertilizer, adding both humus and nitrogen to the soil.

4. Like all the other legumes, *Mellilotus* requires both

phosphoric acid and potash for its successful growth, but these it will largely obtain from the soil itself, as it is of vigorous growth and sends its roots well down into the subsoil, where these mineral fertilizers are usually to be found in abundance. Its nitrogen comes from the atmosphere.—Ed.

5. It grows freely all the way from the Potomac to the Gulf.—Ed.

SORREL.

Can you tell me what will destroy sheep sorrel? Now don't say lime. You might as well tell me a mud turtle will tree squirrels. Don't say get your land rich. Just as well tell me you can make whitewash from charcoal. Don't say work your land in a hoed crop. Just as well tell me it does not pay to advertise in the Southern Planter. I have tried all the above but still have patches in my grass. Now, there are a great many more "don'ts" but I don't want to take up too much of your paper.

King and Queen Co., Va. L. H. CARLTON.

As our friend seems to know a good deal about sorrel, we hesitate as to the reply we should give him. We believe, notwithstanding what he says, that the great means of getting rid of this crop is to make the land rich and to get it free from acidity, so that the leguminous crops can flourish in it. They will then smother out the sorrel. Of course wherever sorrel has been allowed to flourish for years, there will be such quantities of seed in the land that even with the best of farming, it will for many years appear more or less in the various crops growing, but just as surely as the land becomes rich and capable of producing heavy crops, so certainly will sorrel disappear.—Ed.

VETCHES.

1. Is Hairy or Winter vetch a legume?
2. What is its fertilizing value compared with Cow peas, clover, etc.? C. M. FARRAR.
Putnam Co., W. Va.

1. Both the Hairy and Winter vetches are legumes. They are two distinct plants.

2. The Hairy vetch will probably gather more nitrogen from the atmosphere during its period of growth than either the Cow peas or clover. It is one of the most valuable of the legumes in this respect.—Ed.

ALFALFA—COW PEAS.

1. Will you please let me know if alfalfa can be seeded on corn land after the corn has been cut and shocked?

2. Also can Cow peas be cut with the mower to save the peas for seed? If so please give the best method.
Campbell Co., Va. W. C. JONES.

1. We would not advise you to attempt to grow a crop of alfalfa after corn has been cut and shocked. It is then too late in the fall to sow with a fair prospect of succeeding. It would probably be more likely to succeed if sown in the March following, indeed in your section of the State, we think probably spring seeding would be quite as likely to succeed as fall seeding.

2. Cow peas can be cut with a mower without wasting many of the peas, if care is used in moving them out of the way of the horses and in handling them after they are cut. The best machine to cut them with is the reaper, from which they can be dropped clear of the horses.—Ed.

WHEAT GROWING.

I have a field partly in wheat and balance of the field in peas. I want to improve this land and want to sow the whole of it in wheat this fall. It is thin land, mostly red

clay soil. Please advise me how best to improve it, the kind of fertilizer to put on it and the quantity per acre? How about lime, is it the thing? SUBSCRIBER.

Patrick Co., Va.

We have no doubt but that lime applied to this land would greatly improve it for the production of wheat. You should plow the wheat stubble as soon as possible and it would be well, if you do not need the peas for hay, to cut them into the land with the disc harrow, as when plowed down just previous to seeding wheat, they have a tendency to make the land too puffy to grow wheat successfully. If you need the peas for hay, then cut them, leaving a long stubble and plow this down. After plowing all the land, apply 25 bushels of lime per acre and work the land up every week or ten days with the harrow and roller, until you have gotten the land as fine as possible; then previous to the time of sowing the wheat, apply 400 pounds to the acre of raw bone meal and acid phosphate in equal parts and sow either broadcast or with the drill one and one-half bushels of wheat per acre.—Ed.

ACID PHOSPHATE—SOIL ACIDITY.

After reading, in the June number of Southern Planter, page 454, your article headed "Soil Acidity," in which you reproduce a letter written by Dr. Thorne, Director of the Ohio Experimental Station, to the Practical Farmer, I wrote to Dr. Thorne and received the letter which I herewith enclose.

I would like to see this subject of soil acidity and the tendency of acid phosphate to increase this acid condition, fully discussed in the Southern Planter, as I deem it a matter of great importance to the farmers of this section. We have considered acid phosphate the best and cheapest fertilizer we can use on our red lands. We often use it mixed with bone meal and sometimes add nitrate of soda and sulphate of potash.

For some years past the clover crop has been almost a failure and we are anxious to know whether to ascribe it to the use of acid phosphate.

I attended the lectures of Dr. Wm. B. Rogers, of the University of Virginia, in 1849 (Dr. Rogers was one of the most distinguished chemists of his day), and am under the impression that he considered the red lands of Albemarle as amply supplied with lime. If this is true it would seem, according to Dr. Thorne's statement that acid phosphate would not be injurious, but we do not know how to account for the failure of the clover crop. The price of lime and cost of transportation would preclude its use on most of our lands. Do you think we could use floats, or undissolved phosphate in place of acid phosphate and mix this with bone meal and nitrate of soda? If so would you use raw bone meal or steamed bone meal which is said to act more quickly and to contain more ammonia.

I have been a subscriber to the Southern Planter for more than fifty years and feel that I have been greatly benefited by information received from its pages.

Albemarle Co., Va.

WM. H. HARRIS.

In our June issue we gave our opinion on this question of the possibility of acid phosphate conducing to an acid condition of the soil. At that time we had not before us Dr. Thorne's views on the subject. These we published in the July issue. Whilst we are bound to recognize and accept the results of Dr. Thorne's experiments as going to prove that the use of acid phosphate has prejudicially affected the clover producing capacity of his plots we yet are of opinion that as a general proposition it may be stated that acid phosphate will not induce acidity of soil prejudicial to the growth of any crop except it may be clover or some other of the legumes which are dependent mainly upon bacteria in the soil for their luxuriant growth. These bacteria are so prejudicially affected in their growth by even

a slight acidity of soil that a crop dependent on them may fail where all other crops would flourish. No doubt if there be surplus acid in the phosphate either caused by too much sulphuric acid having been used in its manufacture or brought about by decomposition of the phosphate in the soil in the process of plant production the surplus acid rejected by the plant would unite with the lime in the soil and thus reduce the supply and conduce to acidity. In order to obviate this lime should be applied after the phosphate. Whilst as a general proposition your lands in Piedmont Virginia may be taken to have a normal supply of lime sufficient for most crops yet we have frequently known lime to be applied to land on a limestone formation with excellent results. You ought to be able to get this lime in Piedmont Virginia so cheaply that it could be afforded to be used freely. You have limestone near you in abundance. All that is needed is that it should be burnt and you have both wood and coal near at hand to do this. Even if obtained from the Valley or from beyond Lynchburg it ought not to be so costly as to be prohibitive. It is being sent from Southwest Virginia into Southside Virginia and sold on the line of the Norfolk and Western at \$3.00 per ton. We do not think that the use of floats would take the place of lime. The lime in floats is in the form of a phosphate of lime and very slowly soluble in water. What is needed is a carbonate of lime which is the most water soluble form. Steamed bone meal is more quickly soluble than raw bone meal, as the glutinous and fatty matter which hinders decomposition in the soil has been dissolved out of it by cooking. We appreciate your long support of the Planter and the compliment paid it.—Ed.

TICKS IN PASTURES.

In the last issue of the Planter you say that if cattle are kept off tick infested lands "for a year the ticks will die out." My father has a piece of land that is never pastured, and from what I can learn there has been no cattle on it for over 40 years, and it is full of ticks. Where do they come from and how do they live? The land is in cultivation nearly all the time. He has a summer pasture of about 10 acres that has been pastured every summer for over 20 years, and until four years ago the cattle were always full of ticks, and now we never see any ticks on our cattle. What causes the ticks to disappear in our summer pasture? Please answer in your next issue.

Mecklenburg Co., Va.

M. G. RUSSELL.

Our enquirer fails to recognize the point that there are ticks and ticks. When we wrote the paragraph quoted we were discussing the question of getting rid of the tick that causes Texas fever. This particular tick is the only one of all the many different varieties infesting our woods and lands which causes the death of cattle or any serious loss to the farmer. We said that a pasture could be cleared of these ticks in a year. Since we wrote that paragraph a bulletin giving the result of further investigation into the subject has been received and the author, a high authority on the subject, Prof. Morgan, of Tennessee Experiment Station, says that if all hosts of the Texas fever tick, that is to say, cattle, horses and mules, were removed from a pasture on June 1st this pasture would be tick free by early October. There are, however, many other kinds of ticks which have different hosts which might be found on the pasture, and these other ticks are those which the enquirer finds on lands which have never been pastured with cattle, and probably most of those which now infest the 100 acre pasture are of these different ticks, as he says

nothing of these ticks causing the deaths of cattle. Had they been Texas fever ticks his cattle would ere this have been attacked with fever and many have died. Probably the ticks now infesting the pasture have been introduced by wild animals and dogs. In the absence of the particular host animal they will disappear.—Ed.

SICK TURKEYS—PACKING BUTTER FOR WINTER USE.

1. I wish to know if there is any remedy for bowel trouble in young turkeys. I have lost 12 or 14 apparently healthy strong birds when about 2 or 3 weeks old with this trouble. They are all matted and stiff with dung behind. I feed hard boiled egg mixed with stale bread, soaked in milk, and then squeezed as dry as possible.

2. Give directions for packing and keeping butter for winter use.

MISS GREEN.

Albemarle Co., Va.

Diarrhoea from which your turkeys have evidently died is a very prevalent trouble with young turkeys. Sometimes it is an evidence of the disease known as "Blackhead." At others it is evidence of cholera and again it is simply ordinary diarrhoea. If Blackhead be the cause of the trouble it is almost useless to try to cure it. This is a microbic disease, much aggravated by inbreeding, and is an evidence of depleted vitality in the stock. It attacks the liver which is much enlarged and discolored. The use of medicine of any kind is of little avail. Sulphur 10 grains, sulphate of iron 1 grain, and quinine 1 grain, given two or three times a day is probably the most likely to help the birds, but the proper course is to get rid of all the stock and thoroughly disinfect the houses and start with new strong, healthy birds not in any way related to each other. For cholera there is no cure. Kill off all affected birds and burn them and remove the well ones to another run. For simple diarrhoea keep the birds free from dampness and lice. Feed boiled rice and a little charcoal in the food and give equal parts of ground ginger, cinnamon, cloves and cayenne pepper, a stroked teaspoonful to a dozen young poults. Double this amount when four or five weeks old.

2. The main point to be observed in making and packing butter for winter use is to be certain that your butter is of fine quality when made, free from any trace of rancidity or unpleasant flavor and well washed to free it from any trace of curdy matter. To secure these requirements study carefully and follow closely the directions for butter making contained in the article on page 373 of our May (1905) issue by Prof. Soule. In the same article will also be found directions for packing the butter.—Ed.

IMPROVING LAND.

I have several acres of bay land that will not produce anything but dog fennel and yellow flowering weeds that grow luxuriantly. What does it need to make it produce corn? My farm is mostly fine gray sand soil, low but drained. When newly cleared it produces peas for about four years and ordinary good crops of corn, but will not produce peas afterwards. What does it need?

Bladen Co., N. C.

D. J. ALLEN.

What your land most needs is deep plowing and perfect cultivation so as to open the subsoil and bring some of the underlying soil to the surface. Then it evidently needs vegetable matter in the soil and to secure this should have 200 or 300 pounds of acid phosphate applied to the acre. This will make it produce peas in summer and Crimson clover in the winter. These crops should be plowed down for a year or two, the clover in April or May, and the peas

after they have nearly matured, say in September. When you have got your land deeply broken, and if there is a hard pan under it this also broken with the subsoil plow and have filled it with humus from the peas and clover then it will produce crops. If you can apply 25 bushels of lime to the acre this will also greatly help it. Afterwards keep it well supplied with vegetable matter by always growing a Crimson clover crop on it in winter to plow down in the spring and you will have no difficulty in making crops.—Ed.

HARVESTING COW PEAS.

I have 10 acres of Cow peas planted in rows three feet apart. Have inoculated and fertilized them according to your advice. Have cultivated them the second time and they are looking fine although they are on poor ground. I want to get all the pea grain I can. Will you please advise through your August Planter the best way to harvest and thresh them? Can I handle them so the straw will be of any value as feed?

R. N. L.

Washington Co., Va.

The peas should be cut with a mower or reaper. A reaper is best as the peas can then be dropped off in small bundles out of the way of the horses. If cut with a mower it will be necessary to have men to follow the machine and turn the cut vines out of the way of the horses or they will tread out many of the peas. Let the vines lay in windrow or small lumps for a day or two then turn over and put up into small cocks to cure out, handling as carefully as possible so as not to shake out the peas. They can be threshed out either with a grain separator or with flails. If threshed with a separator it should be run slowly and plenty of room be given by removing part of the concaves so as not to break the peas. Many thresh out with flails and some tread out with horses, but the separator is best if carefully run, as it puts the peas into shape for the market cleaning out all dirt and trash. The straw and hulls will be eaten by stock with avidity.—Ed.

ALFALFA IN CORN—SILO.

1. I am growing five acres of late corn on wheat stubble. Corn planted June 28 and 29, cultivated first time 10th July, fine stand, four inches high. Can I, say the last working of the corn 10th of August, sow this land to alfalfa with any certainty of a stand, and would 20 pounds of seed per acre be sufficient for a stand?

2. I have two cisterns at my barn 12 feet deep and 15 feet circumference, could these be used as silos for the green corn ensilage, or should I feed the green corn in stalk to cattle?

3. I have 14 acres Red clover sowed in April on wheat, a good part of the clover is now 6 to 15 inches high, is beginning to bloom. What is best to do with it? Pasture with cattle, mow wheat stubble with clover for feed, or let alone on the land?

4. What seems likely in the next two years as to the profitability of cattle, hogs and sheep? Can a young farmer with limited means and 300 acres of good farming and grazing land, all under fence, afford to pay \$55 for one buck and two ewe Dorset lambs?

Scott Co., Va.

YOUNG FARMER.

1. We would not advise the attempt to grow alfalfa in the corn. Whilst the land will no doubt make a good corn crop yet it has not had that special preparation of the soil for alfalfa which is essential to success. In this issue you will find our advice as to the proper preparation of land for the alfalfa. Better sow Crimson clover in the corn. This will be much more certain to make a stand and conserve and improve the fertility of the soil for alfalfa another year.

2. The cisterns could be utilized for silos but would be

greatly improved for the purpose and save much more of the product by adding another 12 feet to the depth by building stave silos on the top of the existing cisterns. This should not be difficult to do. Use staves cut out of oak or well seasoned pine and put on a broad wood or iron hoop at the point of junction between the cisterns and the staves so as to make a closed tight joint. Depth in a silo is a great essential in securing a well preserved article of food. When the depth is not great the silage does not compact well and much waste occurs.

3. We would cut the clover for hay. The growth is so tall that much of it would be wasted in pasturing and to leave it alone would no doubt result in much of the stand being killed by the clover falling down and rotting the crowns of the plants. There is still plenty of time for a sufficient new growth to be made to protect the crowns from injury by frost.

4. We have confidence in the future of the live stock markets in this country. There is no over supply of either beaves, sheep or hogs in comparison with our rapidly growing population. Whilst we are most anxious to see our farmers take hold of pure bred stock and especially of pure bred male animals to head their herds and flocks we would say to a man in your position do not plunge too far until you have had some experience. Buy at first only a pure bred buck and one or two ewes at a moderate price (\$55 is a good price to pay for three sheep, you should get what will serve you for a start for less than this sum) and some good grade Merino ewes and build up a flock gradually.—Ed.

PEAS.

Will you please give me through the August number of Southern Planter the cost of raising peas? What would it cost to raise 10 acres of peas to get them ready for market, and also advise the most profitable peas to plant as a money crop and the best way to cultivate same? How many bushels of peas could be raised on very good land per acre?

SUBSCRIBER.

Halifax Co., Va.

You do not say what kind of peas you wish to raise whether English peas or Cow peas. We have in recent issues given particulars of the quantity of Cow peas that can be raised per acre. We shall be glad if some of our trucker readers will give information as to average yield of English peas per acre grown as a green market crop and as a canning crop and the cost of raising them. We have never grown this crop for these purposes and can find no definite statement as to yield and cost.—Ed.

LAWN GRASS.

When is the best time to sow lawn grass, in the spring or fall, and what months should it be sown in?

Albemarle Co., Va.

JOHN D. GITCHELL.

Sow in August or September and if this seeding fails to stand on account of a severe winter sow again in March.—Ed.

WINTER PASTURE—FORAGE CROP.

1. I have a small lot that is in corn and I want to sow it in wheat very thick about the 1st of September to have a pasture in the fall for my sows and also to use it until the latter part of April for the same purpose and then this will be broken up again for corn. Would you sow anything else with this wheat, such as rape or vetch?

2. Hay crops around here are very short this year owing to a drouth in the early spring. I am thinking of sowing

about five acres in peas, sorghum and corn with about one-third of each. I think this would give me a nice crop of hay that would be about ready to cut just before my corn was ready. Any suggestions along this line will be appreciated.

TOWSON E. SMITH.

Rappahannock Co., Va.

1. Sow a mixture wheat, winter oats and rye in equal parts, say three-fourths of a bushel to the acre and 10 pounds of Crimson clover per acre instead of the wheat alone. This will give you a better pasture and a better fallow to plow down.

2. The mixture suggested should give you a good crop to cut for hay in the fall. Do not let it stand too long before cutting as it will take considerable time to cure at that season.—Ed.

WHEAT SEEDING—GRASS GROWING.

1. Will you kindly advise me as to the best way to prepare corn land for wheat, and the right quantity to sow per acre; also the best way to get it in grass and kinds and amount to be sown per acre? We have sown several mixtures of Timothy and other grasses and clover in March and each time have failed to get a good stand.

2. If corn ground is to be sown in wheat what is the best way to harvest the corn? We usually cut it sixteen hills square.

J. L. M.

3. How ripe should fodder be to make the best feed?

Where land has been prepared for the corn crop as it ought to have been that is deeply plowed and finely prepared before planting and the crop has been kept well cultivated during growth a crop of wheat can usually be produced on the land without again plowing quite as successfully and indeed often more successfully than if plowed late after the corn has been harvested and seeded at once. Corn land thus plowed and worked before the corn was planted and well cultivated during the growth of the crop gives an ideal wheat seedbed, that is one with the soil down to the subsoil thoroughly broken and yet compacted again and all that is required to complete this seed bed is the working of the surface soil, say to the depth of 3 or 4 inches into a fine stub bed. This can be done with a Disc, Acme or Cutaway harrow or with a cultivator and harrow and the roller. Sow from one and one-half to two bushels of seed wheat to the acre. The richer the land the less seed is required, but we are strongly of opinion that much of the light yields of wheat produced in this country is caused by too thin seeding. Of course if the land is not rich or in a good mechanical or physical condition lime at the rate of 25 bushels to the acre can be applied with advantage at the time of working the surface soil and bone meal or bone meal and acid phosphate should be applied at the time of seeding.

In this issue will be found in the article "Work for the Month," our advice as to seeding grass. All grass should be sown in the fall in the South.

2. Cut up the corn at the root and cure in shocks setting the shock rows as far apart as possible so as to permit of preparing and seeding the larger part of the land whilst the corn is curing.

3. The more nearly mature the fodder the better the feed. Fodder cut when in full luxuriant growth is too watery to make the best feed.—Ed.

PLANT FOR NAME—ALFALFA.

Enclosed you will find a plant of which I hope you will give me the name in the next issue of the Planter. Also whether the land it grows on would do to inoculate the soil

intended for alfalfa? I intend sowing an acre in alfalfa this September and would like to know how much lime and what fertilizer to use. I had the piece of land in wheat, have plowed down the stubble, put 300 pounds of acid phosphate (14 per cent.) to the acre and sowed it in black peas, putting one and one-fourth bushels per acre. The land is a sandy loam, bringing about six barrels of corn to the acre, well drained.

H. T. GARNETT.

King George Co., Va.

The plant is *Medicago* (sweet clover). The soil on which it grows will inoculate the land intended to be sown with alfalfa with the proper bacteria. In our article, "Work for the Month," in this issue will be found advice as to preparing land for alfalfa. You have started right to secure a stand.—Ed.

SMALL PIGS.

I have a sow that farrowed 12 pigs which were the smallest I ever saw. Some of them were no bigger than rats. They came 10 days before they were due. I feed one part corn meal and two parts bran and shorts and have rape pasture. Give me advice as to ration for sows.

H. J. WOODWARD.

So large a litter of pigs coming prematurely is almost certain to have a large proportion of the pigs undersized. Had the sow carried them the full time many of them would have been of normal size as they grow much in the last ten days of the period of gestation. You are feeding a ration which should give you good results. Possibly more shorts and less corn meal would somewhat improve it as providing more protein in the food.—Ed.

CABBAGE WORMS.

Please give some remedy for worms and bugs that eat cabbage set out in July.

J. F. SIMMONS.

Princess Anne Co., Va.

Keep the cabbage plants frequently dusted with Persian Insect Powder. Cultivate frequently and push the growth with top dressings of nitrate of soda, not letting the nitrate touch the plants. This will enable them to get out of the way of the bugs and worms. Some apply Paris green. Whilst this may be safely used before the plants begin to head yet we have always a fear in advising its use lest some of the powder may get wrapped in the leaves and thus cause injury to the eaters of the cabbage.—Ed.

VINEGAR MAKING.

Will you kindly tell me how to make apple cider turn to vinegar? I have some two years old that has not turned well although it has been drawn off several times and had good vinegar mixed with it.

S. R.

Bedford Co., Va.

Send to the Experiment Station at Blacksburg for their Bulletins on vinegar making. These will explain to you the whole subject much more completely than we can do in the space at our command. They are sent free.—Ed.

LIMING LAND.

How much lime should I apply on one and one-half acres of land and when should it be applied.

Norfolk Co., Va.

W. W. WEBSTER.

Apply 30 bushels of lime to the land after it has been plowed in the fall and harrow in and let lay for a week or two and then work thoroughly and prepare for the seeding of the crop.—Ed.

JOHNSON GRASS.

In your last issue an enquirer asks whether flooding will kill Johnson grass. I have known a field of this grass to be covered with water for a week and it did no harm to the grass.

LEONIDAS DOUGLAS.

Campbell Co., Va.

Miscellaneous.

THE STATE FARMERS' INSTITUTE, ROANOKE, VA.

We were fortunately able to attend the Institute at Roanoke and take part in the proceedings. We want to congratulate the officers of the Institute and the farmers of the State on the success of the meeting, and especially on the fine attendance from all parts of the State. We never before attended a farmers' meeting in this State where every section of the State was so well represented by live, progressive, representative men. More than 300 of these men enrolled themselves as members of the Institute and paid the annual membership fee, thus indicating their approval of the work and determination to see it continued. Every session of the Institute was well attended, and the addresses listened to with attention, and the discussions participated in by large numbers. In this issue will be found a report of the proceedings by the Secretary. After the Institute the members spent a day at the Agricultural College and Experiment Station at Blacksburg, and expressed themselves greatly astonished and pleased with the work being done there. They for the first time realized that the work being done at the College and Experiment Station was both scientific and practical and of vital importance to the farmers of the State, and expressed themselves as being in favor of the Legislature making whatever appropriations were required by the College and Station. The enthusiasm and well directed ability and energy of Prof. Soule and his assistants at the Station was the subject of much favorable comment. These gentlemen have established themselves in the good opinions of the farmers of the State, and it will be a difficult task for the Legislature to deny them what they may ask for the continuance of the work at the College and Station.

VIRGINIA FARMERS MEET.

Editor Southern Planter:

It is an encouraging sign of the times that the Farmers' Institute movement seems to have taken a firm hold on the affections of the people, for despite the very bad weather of the past three weeks, more than 500 farmers gathered in Roanoke on the 12th, 13th and 14th of July to discuss subjects of general interest to them. The first two days of the Institute were indeed gloomy; the rain came down literally in sheets, and the hard work of the farmer for the past few months suffered severely. In many instances the angry waters got up over the bottoms and swept away the outstanding crops. The bad weather, how-

ever, did not detract from the enthusiasm of those present, and the closest attention was given to the excellent addresses provided. The meeting was also a representative one, as there were delegates in attendance who had travelled more than 250 miles.

The programme was varied in nature, and was carried out according to schedule, a fact worthy of commendation.

Mr. T. B. Terry's discussion of the improvement of the soil, in which he rehearsed his wonderful experience on his farm at Hudson, Ohio, received the closest attention, and as that is one of the great questions with our farmers, he was asked innumerable questions, which were answered in a very satisfactory manner. It is safe to say that the discussion of this subject will bear fruit of great value to the State.

The question of immigration and industrial development, which was handled by Mr. F. H. LaBaume, of the Norfolk & Western R. R., called forth an animated discussion, and it was suggested that the next Legislature be memorialized to provide a fund for the purpose of establishing immigration agencies, either in the Northwest or in Europe. Many of those present thought it would be better to establish agencies in Europe and endeavor to bring settlers and laborers directly to the State, for here, as everywhere, one of the great problems of the farmer at the present time is to secure enough reliable labor at reasonable prices.

Mr. Alva Agee, of Wooster, Ohio, editor of the National Stockman and Farmer, Pittsburg, Pa., discussed Irish potato growing in a plain, unaffected manner that won the instant attention of all present. He outlined largely the plans which he pursued successfully for many years on his southern Ohio farm. There is a growing interest in Irish potato culture on the Eastern Shore of Virginia, and great areas are devoted to this crop. The product goes to Eastern markets, and in the peninsula particularly, where they have a farmers' protective organization for the disposal of their crop, good profits are being made. Mr. Agee called attention to the fact that the climate of the western part of the State, owing to the high elevation, was well suited to the production of late crop Irish potatoes, and indicated how these could be grown and shipped South during the late fall and winter at a good profit. He emphasized the necessity of enriching the soil for potatoes through the use of green manures and deep and thorough culture. He also touched up the question of commercial fertilizers, and the best methods of combatting the various diseases and insect pests which attack this important crop.

He was followed in a witty and able address by Judge George E. Cassell, of East Radford; he show-

ed himself to be an Irish potato grower from the ground up, as well as an able judge. Mr. Cassell showed samples of various varieties of potatoes which he was growing successfully on his farm, and gave a detailed exposition of the methods he has pursued with such excellent results.

The dairy interests of the State were ably presented by Mr. T. O. Sandy, of Burkeville. He showed how he had taken a poor, worn out Virginia farm and built it up by means of the dairy business until it has become a very profitable investment. He ships cream into Richmond, and is making practically \$100 profit per cow. In view of the difficulty many of our farmers have experienced in making a satisfactory profit from the land, his paper was received with the closest attention. An interesting discussion followed, in which Hon. Jos. Wilmer, of Rapidan, and Major A. R. Venable, Jr., of Farmville, took part.

The trucking interests of the State were ably presented by Mr. A. Jeffers, of Norfolk. He said that the State's interest in truck crops now amounted to some twelve millions of dollars a year, and that Virginia offers wonderful advantages to truck growers because of her situation, and the fact that the climatic conditions of Norfolk, owing to the proximity of the ocean, are so favorable for the growing of early crops. It was pointed out that in many instances Virginia enjoyed an immense advantage over Florida and other Southern States.

At the night session the work of the College of Agriculture and Experiment Station was presented by the writer by means of a series of lantern slides, and the need of appropriations for these institutions was pointed out, with the result that the following resolution was unanimously passed, and every member of the Institute agreed to constitute himself a committee of one to see that no effort was spared to induce the Legislature to make the necessary appropriation at its coming session:

"Resolved, That in the opinion of the association an appropriation of \$100,000 should be made by the next Legislature for the development of the State College of Agriculture and Experiment Station, located at Blacksburg. \$50,000 of this will be required to complete and equip the agricultural hall now building, \$10,000 a year for additional maintenance and support for the Virginia Experiment Station, \$15,000 for a stock and grain judging pavilion, \$5,000 for barns and roadways, and \$10,000 for live stock, particularly horses. At the present time the facilities for obtaining an agricultural education in Virginia do not equal those enjoyed by students in other vocations, and the mere fact that appropriations ranging from \$100,000 to \$300,000 have been made for this purpose in neighboring States shows how clearly the importance of agricultural education and the solution of the difficult problems which confront the farmer are being appreciated."

Mr. Agee followed in an able address on the Great-est Need of Agriculture, and pointed out that the farmers should support their College of Agriculture and Experiment Station in the most emphatic manner. He said if they did not insist on suitable appropriations being made and give the institution their support that little progress could be made. His argument clinched the proposition, and was frequently applauded. He discussed at some length the history of farming and the difficulties with which the farmer had to contend until science became his hand-maid. He showed how the many scientific discoveries made largely through the efforts of the Experiment Stations in this country, had redounded to the advancement of agriculture. He called particular attention to the value of agricultural instruction, pointing out the fact that large numbers of students who had taken short courses and long courses alike were doing missionary work on a scale which was not appreciated by the average farmer. He said the future of American agriculture depended largely on educating the boys, because at the present time there was a great desire to get away from the farm and abandon it for other pursuits that were not as satisfying nor as profitable in the long run because the farmers and their children were ignorant of the enlightening influence of education, and the tremendous power which it gave to all who are engaged in trying to work in harmony with nature.

The feeding trials with beef cattle at the Virginia Experiment Station were handled by Prof. John R. Fain, Agriculturist. The discussion of this subject was animated, and the facts presented were unusually interesting, for it appeared that the 20 head of cattle fed on silage during the past winter gained 5,100 pounds in 180 days; the 20 fed on timothy hay gained about 3,900 pounds in the same time; and the 20 fed on shredded stover gained 3,400 pounds. These are striking differences, for the cost of the hay was figured at \$9 per ton, the stover at \$5, and the silage at \$2. It appears from these results that the feeding of beef cattle can be pursued with success in Virginia under a variety of conditions that have not been recognized in the past.

Mr. S. S. Cassell, of Rural Retreat, presented a paper on the feeding and handling of calves intended for export purposes, which contained many valuable suggestions. Mr. Cassell has had long experience in handling calves, and he treated the subject in an instructive manner.

A great deal of interest was evidenced in the subject of alfalfa growing. This was to be discussed by Mr. Joseph E. Wing, who, unfortunately, was unable to come, and sent his brother Willis to take his place. Mr. Willis Wing acquitted himself in the most creditable manner and answered the questions which were literally fired at him like a veteran. He demonstrated very clearly to the audience that he was thoroughly familiar with the subject of alfalfa, and con-

vinced many Virginia farmers that climatic and soil conditions make it quite possible for them to grow this crop with success, and encouraged our farmers to experiment more carefully in the future with this important crop, which seems destined to assume an important place in the agricultural economy of the State.

Mr. J. F. Jackson, Editor of the Southern Planter, of Richmond, discussed the subject of Sheep Husbandry in Virginia in a masterly manner. His presentation of the subject was unique, and called forth frequent applause. He pointed out that Virginia had only really made a beginning in the sheep business, and that there was room for remarkable development all along the line. This, of course, was not presented in a spirit of criticism, but with the idea of stimulating renewed interest in the subject.

Mr. J. R. K. Bell, of Dublin, one of the largest sheep raisers in Virginia, discussed the rearing and handling of lambs in a highly creditable manner.

Commercial apple growing in Virginia was discussed by Prof. H. L. Price, Horticulturist of the Experiment Station; Small Canneries in Virginia, by Prof. R. H. Price, of Long's Shop; and our Insect Foes, by Prof. J. L. Phillips, Entomologist of the Experiment Station. The general interest in these problems was evidenced by the large number of questions directed to the speakers.

Mr. Wing being called away in the evening, Prof. John Hamilton, of Washington, D. C., took the entire time for the discussion of the subject of farmers' organizations. It is needless to say that Prof. Hamilton handled the subject in a highly creditable manner. The writer has heard him speak on several occasions, but never before did he acquit himself so creditably. It was a speech well worth hearing, and one that should be studied with great care by all those interested in the management of agricultural and mechanical colleges and experiment stations, for he pointed out the great need of agricultural education and showed how effectively the work of the colleges and stations and the farmers' institutes had developed the agriculture of various States and Territories. Prof. Hamilton was accorded a well merited vote of thanks on the completion of his address.

The institute adjourned sine die at 10 o'clock P. M., having elected the following officers: President, Ex-Gov. J. Hoge Tyler, East Radford; First Vice-President, T. O. Sandy, Burkeville; Second Vice-President, Major John T. Cowan, Cowan's Mills; Secretary, Andrew M. Soule, Blacksburg; Assistant Secretary, J. M. Williams, Roanoke.

Also the following vice-presidents from each Congressional district: First District, A. Jeffers, Norfolk; Second District, Joseph Bryan, Eagle Point; Third District, Joseph R. Anderson, Goochland; Fourth District, C. N. Stacy, Amelia; Fifth District, Dr. J. R. Guerrant, Franklin; Sixth District, S. C. Goggin, Campbell; Seventh District, J. G.

Martin, Albemarle; Eighth District, Judge W. S. Lewis, Leesburg; Ninth District, Wyndham Robertson, Saltville; Tenth District, Col. Joel Flood, Apomattox.

Among the resolutions passed which are not mentioned above were the following: That the next Legislature be memorialized to make liberal grants in order that farmers' institutes may be held in every county each year; that every effort should be made to introduce the teaching of agriculture in the public schools of Virginia; that liberal appropriations should be made by the Legislature to the rural schools in order that the children may be kept in school for longer terms and better buildings provided; that the State Board of Agriculture be requested to provide the means for the publication and distribution of the proceedings of this meeting; that the thanks of the Institute be conveyed to the Norfolk & Western Railway, the Board of Trade of Roanoke, to all those who took part in the programme, to the daily, weekly and agricultural papers of the State, and to the officers of the Virginia Experiment Station and College of Agriculture.

At 8 o'clock on the morning of July 14th a party of more than 350 farmers boarded a special train for Blacksburg on a tour of inspection of the College of Agriculture and Experiment Station. Those attending said it was a most delightful outing. The sun shone out brightly for the first time in two weeks. The party reached the College about 11 o'clock in the morning, and went directly to the chapel, where an address of welcome was to have been delivered by President McBryde, who was unfortunately called away. The itinerary of the tour of inspection was then outlined by the writer, and the party adjourned to the Mess Hall, where a luncheon was served, which seemed to meet with the hearty approval of the farmers, for they gave three lusty cheers for Mr. Shultz, the College steward. After luncheon a tour of the farm and buildings was undertaken. The experimental orchard was first visited, where more than 450 varieties of apples are growing. The orchards and gardens occupy altogether about 60 acres of land, and the delegates were surprised when they learned that the Station was only in a position to give the horticulturist about \$400 for the conduct of his work.

The experimental plats were next inspected. The new barn, with its excellent equipment, came in for its due share of attention, but the farmers were more particularly interested in the experimental field, which comprises 66 acres, only 30 of which have been laid out in plats at the present time. Prof. Vanatter, who is in charge of this work, made a detailed explanation of the experiments in progress, and pointed out their benefit to the farming interests of the State. Here, again, it was a surprise to the delegates to learn that only \$1,500 a year was available for this important work.

After leaving the plats the college creamery and

cannery were visited, as well as the foundation of the new agricultural hall. Many favorable comments were heard relative to the building, but it was regretted by all that it was not ready for occupancy at the present time, as the farmers of the State are very anxious that short courses shall be provided for their sons. When this new building is completed it will add materially to the equipment of the department.

The College barns were next inspected. The beef and dairy cattle, hogs and sheep all came in for their due share of attention. Many farmers were surprised to know that such excellent herds and flocks were maintained at the Station, and that the College had such a good complement of barns. They realized, however, the necessity of additions to the herds and flocks and the enlargement of the barns because live stock husbandry forms one of the chief interests of the State. There was a decided sentiment in favor of the College making investigations relative to the breeding of light and heavy draft horses, and it will be recalled that provision is made for this in the proposed appropriations asked for by the Institute. The College farm was greatly admired. Fifty-four acres of land are devoted to silage crops, and there is an experimental field of 125 acres divided into sections of 25 acres each. The elaborate and systematic records kept on the farm and on the plats and in the various departments of the Station were greatly admired, and it was very clear to all that the amount of labor involved was simply enormous, and that if the elaborate plans evolved are carried out as they should be they would result in the discovery of facts of immense value to the farmers of the State. It was clearly recognized, however, that with the meagre support which the College farm now receives and the small amount of money available for clerical services that without additional funds it would be impossible to maintain the work in progress, much less expand it in directions which the pressing needs of agriculture in the State make imperative.

Altogether, the crowd was highly delighted with what they saw, and did not hesitate to express their commendation of the work in progress, and to wish those in charge of it God-speed. They were also very emphatic in their statements with regard to the character of work now being undertaken in the College and Station, and did not hesitate to say that they would do all in their power to see that the appropriations sought were granted.

Thus ended the second annual meeting of the Virginia State Farmers' Institute. It was successful beyond the highest hopes of its originators. More than 250 farmers joined the Institute, and over 500 were present. On the return trip to Roanoke a petition was circulated approving of the work now being done at Blacksburg, and calling for the organization of farmers' institutes in Virginia on a systematic

basis in the future. It is safe to say that Virginia farmers are now well acquainted with the value of the College and Station work as related to their business, and the great benefits which will flow from a systematic organization of institutes throughout the State. They have been quiescent for a long period, but the time seems to have arrived when they are ready to discard old methods for newer and better ones, and to insist on receiving their fair share of recognition in legislative halls, and to insist on the fostering of those institutions whose maintenance will be of the greatest benefit to them.

ANDREW M. SOULE, *Secretary.*

RENTED FARMS.

Editor Southern Planter:

Replying to "N" in the June PLANTER, who asks a remedy for existing conditions as to renting farms, allow me to say that the first requisite to secure a high price for any commodity one may have is to create a demand for the same. A farm is no exception to this rule. In the first place, make the tenure of your farm desirable. Make the buildings attractive and the soil fertility high. That this can be done on the poorest farms in Eastern Virginia my own experience and observation leave no doubt. To do otherwise is poor business management. To sell the fertility of the land is the height of folly. If one considers farm land as of any value he ought to give it the same attention he would give to any other property or business. No one would allow a business stand or dwelling house he might own in a city to so deteriorate as to be undesirable to a good tenant. Yet this policy is too often pursued with rented farms. Next, secure a good tenant. You will have no trouble in this respect if your farm is desirable above others in your vicinity. A good renter is one who looks after his own interest certainly, but who understands that your interest is his also. That a farm may be run on a business basis and the fertility of the soil be increased year by year is a fact too patent to require discussion. Have the fields so fenced as to allow of a rotation of crops. Insist that the proper number of stock be kept on the place. Insist that the proper amount of legumes be sowed, and, if possible, plowed under.

Lastly, a crop rental is the most fair to all concerned. On a good farm a fair way is for landlord and tenant to each furnish half of the stock and to divide equally everything sold. On a poor farm the tenant, who must live, requires a larger share. The remedy, then, is to make the farm good, since half of a large crop is preferable to one-quarter of a poor one.

L. L. BURRITT, *York Co., Va.*

Compounded semi-annually.

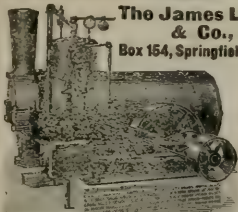
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Simple, highly efficient, durable, are specially adapted to farm uses.



Widely known as the quickest, easiest steamers built. We make them Portable, Horizontal, Upright. Engines mounted on boilers or detached. No other style of power will give you such satisfactory service. We want to tell you the reasons why. We ask every Planter reader who wants a dependable power to write us today for our book, "Power Economy and Efficiency."

The James Leffel & Co.,
Box 154, Springfield, Ohio.



BUY DIRECT

and save dealers profit. Vertical, Horizontal, and Portable Gasoline Engines. Pumping outfits a specialty. Our Engines are guaranteed to do all we claim for them or your money refunded. Write to-day **BAUROTH BROS.** 56-56 Fisher St., Springfield, Ohio.

Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 5 horse power, \$100; 6 H. P. double cylinder, \$200.

SOUTHERN MACHINE MANUFACTURING CO.,
731 E. Cary Street, Richmond, Va.

BOILERS - ENGINES

new and second hand, from 2 to 100 H. P. Gasoline Engines and machinery of every description at one-third actual value. **D. L. CASEY MCH. CO.,** Springfield, Ohio.



CLEAN, SAFE, DURABLE AND COMFORTABLE

WALLACE B. CRUMB FOSTERSVILLE, CONN.

WITH OUR ADVERTISERS.

Bauroth Bros. are advertising their Gas and Gasoline Engines again in this issue.

Canada Hardwood Unleached Ashes can be had of **T. C. Andrews & Co.** Agricultural Lime is also included in their offering.

The **International Harvester Co.** calls attention to its Corn Harvesters, Huskers and Shredders in an attractive full-page ad.

J. D. Mason wants to buy 20 head of Registered Holstein-Friesian Heifers and a bull.

Melrose Farms are offering some nice large English Berkshires of fine breeding.

Mrs. R. M. Smith wants a nice pair of Virginia bred driving horses.

A. G. Hutton offers some fine O. I. C. pigs, also a Shetland Pony and trap.

A brand new sensible idea in trunks is offered by **H. D. Thacker & Co.** Look up the ad.

The "Tornado" Ensilage Cutter ad. makes its first appearance of the season in this issue. Look up the ad. and send for catalogue.

Aberdeen-Angus Cattle are offered by **Wilson, Bros. & Co.** Bargains offered here.

The "Old Dominion" Drill is the leader in the **Ashton Starke Implement House** ad. in this issue.

The **Nut Nursery Co.** starts the season's advertising with this issue.

The **Woodside Stock Farm** has a couple of attractive ads. in this issue.

W. Grossman is a new advertiser in this number. This is an old established house and is going right after the trade of the farmers of this section.

Orchilla Guano is offered by **Diggs & Beadles, Inc.** Analysis and price are right.

Some nice Berkshires can be had of **J. W. McFaddin.** Refer to his ad.

The **Antrim Farm** is offering some pure-bred and Grade Shropshires.

Oak Grove Stock Farm is better prepared than ever to fill orders for **Essex Pigs** and **Southdown Lambs.**

Steel Roofing is offered in enormous quantities by the **Chicago House Wrecking Co.** at low prices.

Attractive advertisements of **The A. B. Farquhar Co.** appear in this issue. Grain Drills and Engines are offered.

THE HIGHLANDS FARM.

Among the new advertisements in this issue, is that of **Mr. L. L. Dorsey**, proprietor of the "Highlands" Farm, Anchorage, Ky. His offering consists of Morgan horses, Southdown sheep, Shorthorn cattle and Duroc-Jersey hogs—all of the best breeding. **Mr. Dorsey** has been a breeder for 40 years and is well and favorably known in his section. He wants to get into communication with parties desiring good stock of the above breeds.

EASY WORK

EQUAL TO TEN MEN

SAFE AND QUICK

**Sweet Fodder
No Ears Lost**

write for special price

FOOS

MFG CO. SPRINGFIELD OHIO

CORN HARVESTER

New Idea Pitless Scale

Is the name of **Osgood's Steel Scale**, just out. Send for full particulars today. Brand new. You will like it. Correct construction. No walls, no pit no lumber except platform plank. In sections ready to bolt together. Friend, you admit you need a scale and have been losing money every year by not having one. Now don't put it off another day. We will send you one on 50 Days' Free Trial. Liberal terms if desired.



By the way, we want a good agent in your town. If you know one, do us and him a favor by showing him this ad. We need him now to introduce our **New Pitless**. Remember, we make all kinds of scales. Write today sure.

Osgood Scale Co. Box 190, Binghamton, N. Y.

Built for Business

Farquhar engines and boilers are built for hard knocks and durability on the road as well as at work. They have every improvement that experience has shown to be of

Write for catalogue of value. For general all-round service

Engines, Boilers, Saw Mills and Threshers.

FARQUHAR ENGINES and SAW MILLS

have no superior.

A. B. FARQUHAR Co. Ltd., York, Pa.

PRINTING DONE

at the following prices:

Envelopes	100.	500.	1,000.
Letter Heads	30c.	\$1.00	\$1.50
Note Heads	40c.	1.25	2.00
Bill Heads	35c.	1.10	1.75
Cards	35c.	1.10	1.75
Send cash with order.		1.19	1.75

STAR PRINTING CO., Millersburg Springs, Va.



A low wagon at a low price. Handy for the farmer. Will carry a load anywhere a horse can travel.

Low Down Wagons

soon earn their cost on any farm.

Steel Wheels



for farm wagons. Straight or staggered spokes. Any size wanted, any width of tire. Hubs to fit any axle. For catalogue and prices, write to Empire Mfg. Co., Box 140 H Quincy, Ill.

GRAIN and FERTILIZER DRILL


The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill made. No complex gearing to get out of order. Boxes are close to ground. Fully Guaranteed.



Easy regulates quantity of seed or fertilizer, and sows with regularity. Weight, Only 700 lbs. Agents Wanted. Write for Catalogue. THE HENCH & DROMGOLD CO., Mfrs., York, Pa.

SPANGLER DRILL

Low down GRAIN and FERTILIZER



Superior to all other drills. Even distribution of lumpy, damp or dry fertilizers. Increases crop profits. Heavy wheels, broad tires, low steel frame. Fully warranted. Write for free catalogue.

SPANGLER MFG. CO., 804 Queen Street, York, Pa.

Well Drills

For Horse, Steam or Gasoline Power

Well Augers

For Horse Power



Address LOOMIS MACHINE CO. TIFFIN, OHIO

ARTESIAN WELL Contractors.

DEEP WELL DRILLING a specialty. Estimates made free of charge in all localities. If you want any work done write M. S. SCHAILL, Michaux, Va.

Water Problem Solved

Machine for domestic well making. Cheapened by half. Most practical of any. Catalogue free. KOGER & SONS, Mooresburg, Tenn.

OF INTEREST TO MANUFACTURERS.

Perhaps no class of people, the farmer not excepted, has a greater interest in highway improvement than those engaged in industrial enterprise. If the common roads of the country were brought to a condition that would enable farmers to market their products at all seasons of the year, the cost of living in town and city would be greatly lessened, and discontent among laboring people and operatives in industrial concerns would largely decrease if it did not entirely disappear. What is the result? Present road conditions compel farmers to rush their products to market as soon as harvested, when the roads are at their best, as by waiting a convenient time they may not get there at all. If one farmer must do this, his neighbors must do likewise. This naturally congests the market, forcing low prices to the great detriment of the producer and without benefit to the consumer, because the average family in town or city buys only in small quantity at one time, say a day's or a week's supply. What is the result? The speculator, finding prices low and knowing that in a little while the bad roads season will be on when competing products will be kept away from trade centres, buys up the surplus and stores it away for the day which he knows is surely coming when he can demand and receive his own price for his holdings—the stuff for which men toil; which they are compelled to have. And when the citizen in town, the mechanic and operative of the shops and factories, is forced in winter and spring to pay exorbitant prices for those articles of household necessity which went begging for buyers at low prices the preceding fall, he figures the increased cost of living in comparison and grows restless and discontented and is easily led into strikes and other labor disturbances. We all know what usually follows. This, of course, is not all that enters into strike causes, but it contributes a full share. It ought to be perfectly plain to American manufacturers that the continuous, orderly operation of industrial business depends on measurably contented operatives; that men are never contented when the cost of living is above their earning capacity; and that prices of food stuffs from the farm would be always at a decent living level to all concerned if we had systematically improved highways over which farmers could travel to market any day in the year. These farmers would realize better prices for their products than they do and still be able to sell to all classes of consumers at lower prices than is forced by speculators in the bad roads season. If this position is sound, then the duty of manufacturers seems to be to lend their every influence to the support of the Brown-Latimer bills, which seek to bring about systematic and scientific highway construction and improvement in co-operation with the States. It is no

YOU Can Save a Lot of Work! Can Save a Lot of Money! Can Increase Your Comfort! Can Increase Your Profit!



If you are interested in those things we'd like to send you our new book about

ELECTRIC STEEL Wheels

and the **ELECTRIC Handy Wagon**

More than a million and a quarter of them are in use and several hundred thousand farmers say that they are the best investment they ever made. They'll save you more money, more work, give better service and greater satisfaction than any other metal wheel made—because **They're Made Better**. By every test they are the best. Spokes united to the hub. If they work loose, your money back. Don't buy wheels no more until you read our book. It may save you many dollars and it's free.

ELECTRIC WHEEL CO.,


Box 146 Quincy, Ills.



ELECTRIC


THE IMPROVED SCREW STUMP PULLER.

Write for Prices.



Chamberlin M'tg Co, Olean, N. Y., U. S. A.

HERCULES Stump Puller



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 feet without moving or changing machine. Strongest, most rapid working and best made.

HERCULES MFG. CO., 413 17th St., Centerville, Iowa.

STUMP PULLERS SEVEN SIZES

WE PAY THE FREIGHT CATALOG FREE

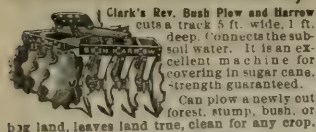
\$17.50 UP

DEPT. F. W. SMITH GRUBBER CO. LACROSSE WIS.

MCCORMICK CORN BINDER

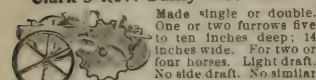
for sale. Splendid machine at a bargain. M. H. ONLEY, Modestown, Va.

No Combines or Trusts in Cutaways



Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the sub-soil water. It is an excellent machine for working in sugar cane. Can plow a newly cut forest, stump, bush, or bog land, leaves land true, clean for any crop.

Clark's Double Action Cutaway Harrow moves 15,000 less of earth in a day.



Clark's Rev. Sulky Disc Plow Made single or double. One or two furrows five to ten inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar plow made. When Clark's grass tools are used as directed in his grass circular, we the C. H. Co., guarantee them to kill wild mustard, charlock, hard neck, sunflower, milk weed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seedling to grass.

THE CUTAWAY HARROW CO.,
Higginum, Ct., U. S. A

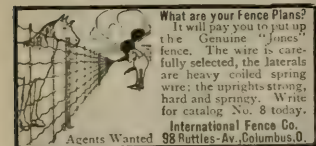
Imperial Pulverizer, Clod



Send for The Peterson M'g Co., Kent, O.
Circulars
We also manufacture old reliable Rice Headers.



WIRE - FENCE
Heavy lateral wires, heavy hard steel stays, cold spring wire, Sure Grip Lock. In strength, appearance and durability, the Hard Steel can not be excelled. Write for catalogue and prices THE HARD STEEL FENCE CO., Cuyahoga Falls, O.



Agents Wanted
192 International Fence Co.
52 Rittenbach Av., Columbus, O.



Page Woven Wire Fence Co., Box 5161, Adrian, Mich.



DOW WIRE WORKS—LOUISVILLE, KY.

WE'LL PAY THE FREIGHT
and send 4 Heavy Wheels, Steel Tire on, \$25
With Rubber Tire, \$10.00, 1 mfg. wheels \$5 to 4 in.
tread. Top Bogies, \$25.75; Harness, \$3.40. Write for
catalog. Leave box to buy direct. Repair Wheels \$2.50.
Vagon Umbrella FREE. V. BOOE, Chicksaw, Ga.

less in their own interest than that of the farmers, who are their best patrons after all. And it is no less the interest of all consumers of farm products in every town and city in the United States, and of every railroad and other corporation employing labor of any kind, and of every railroad and building contractor and others having men in their employ.

We are advised that Hon. W. P. Brownlow, member of Congress from Tennessee, is desirous of hearing from manufacturers on this question, and will appreciate any expression of views thereon that may be sent to him at Washington.

WHAT A GOOD TOOL MEANS.

By Remembering One Name You Are Sure of Satisfaction.

Ever had to stop work and drive several miles into town to buy a tool to replace one that had given out? And after you had begun work again did you ever have the new tool go bad and have to make a second trip to town to get another tool?

Even if the dealer gave you a new tool for the defective one, that didn't pay for your lost time, and you had to take your chances again on the new tool. If you've ever had such an experience, you have undoubtedly wished that you knew of a thoroughly reliable brand of tools.

You may have learned since, that there is such a brand—if you haven't, you should now. This brand is the Keen Kutter—a trade mark that covers a complete line of tools, so that by remembering just that one name you can be certain of getting a good tool of any kind.

Keen Kutter Tools are the best that brains, money, and skill can produce. They have been standard of America for 36 years, and were awarded the Grand Prize at the World's Fair, St. Louis; this prize being the only award ever given a complete line of tools at a great exposition.

Every Keen Kutter Tool is made and sold under the trade mark and motto: "The Recollection of Quality Remains Long After the Price is Forgotten."

Some of the kinds of Keen Kutter Tools are: Axes, Adzes, Hammers, Hatchets, Chisels, Screw Drivers, Auger Bits, Files, Planes, Draw Knives, Saws, Tool Cabinets, Scythes, Hay Knives, Grass Hooks, Brush Hooks, Corn Knives, Eye Hoes, Trowels, Pruning Shears, Tinners' Snips, Scissors, Shears, Hair Clippers, Horse Shears, Razors, etc., and Knives of all kinds.

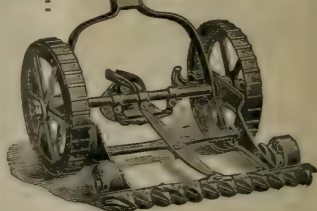
If your dealer does not keep Keen Kutter Tools, write to the Simmons Hardware Company, St. Louis, or 298 Broadway, New York, and they will see that you are supplied.

A neat Blinder for your back numbers can be had for 25 cents. Address our Business Office.

Clipper Lawn Mowers

WILL cut short grass, tall grass and weeds. If your dealers have not them, here is the price. Send draft or money order.

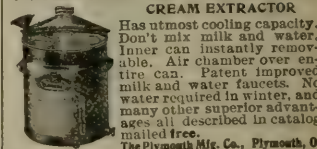
No. 1—12 in. \$5.00
No. 2—15 in. \$6.00
No. 3—18 in. \$7.00
No. 4—21 in. \$8.00



CLIPPER LAWN MOWER CO., Dixon, Ill.



THE 4-LEAF CLOVER



Save The Posts

Old field pine made to last longer than cedar or locust by creosoting with dead oil of coal tar. The creosoting of lumber makes it practically indestructible, stops all rot and is absolute death to all insects. Write for prices to the NORFOLK CREOSOTING CO., Norfolk, Va."

..Second Hand Bags..

Wanted. Any kind, any quantity, anywhere. I pay the freight. GEO. T. KING, Richmond, Va.

Always mention the Southern Planter when writing advertisers.



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THE STRONGEST, MOST POWERFUL,
SWIFTEST AND LIGHTEST
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For many years the standard. Lead in character of work, speed, easy and safe operation.

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AGENTS MAKE \$100

week selling cement fence post outfits. Posts cost 15c. All farmers interested. **MACKAY & CO., 84 Washington St., Chicago.**

"HAY, STRAW AND GRAIN REPORTER."

Dederick's Great Annual Report on the Hay Crop Will Be Issued August 1st.

The extent and value of the hay interest of the United States can hardly be appreciated by one who is unfamiliar with its history and development. It's an industry that has made wonderful strides since the introduction of the hay press.

The well-known firm of P. K. Dederick's Sons, Albany, N. Y., the founder of which invented the hay press, have for quite a number of years published an annual report on the hay industry, called the "Hay, Straw and Grain Reporter," which has proved to be of vast interest to farmers. It contains in concise form reports from numerous correspondents on the estimated amount of the hay crop in all parts of the world and a forecast on prices for the coming crop. In addition to the articles on the hay industry, there is also quite a lot of space devoted to straw and grain. This well-written and interesting publication, which has time and again shown farmers how and where to get the best prices for their crops, will be sent free to any address.

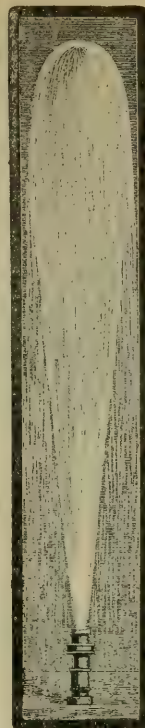
Owing to a fire recently in the Dederick plant, the coming issue of the "Hay, Straw and Grain Reporter" will not be issued until August 1st. There will be no delay, however, in the filling of orders for Dederick Baling Presses and their delivery. These well-known presses received the highest award and only Grand Prize on Baling Presses at the St. Louis Exposition.

The manufacturers, P. K. Dederick's Sons, 26 Tivoli street, Albany, N. Y., will be glad to send a copy of their handsomely illustrated catalogue and the "Hay, Straw and Grain Reporter" to any address upon request.

BARBED WIRE FENCES.

The man who uses ordinary soap for shaving will soon find out how a horse feels when he gets mixed up with a barbed wire fence. You can buy a new horse but you cannot buy a new face, no matter how irritated or blotchy it gets or how badly it itches. Avoid laundry or toilet soap for shaving as you would a barbed wire fence. Williams' Shaving Soap is made especially for shaving and in another column of this paper is an offer of a free trial sample. "For the sake of your face, try it."

"I cured a horse with your Absorbine of a bad case of capped hocks," writes H. A. Lantzenhiser, J. P. Greenville, Pa. It will do the same for you. Absorbine can be procured at your druggists, or I will send a bottle, charges prepaid, upon receipt of \$2.00. W. F. Young, P. D. F., 109 Monmouth street, Springfield, Mass.



DID IT EVER OCCUR TO YOU

that an artesian well is the absolutely sure source of pure, clear, cool water

AND

that we make a specialty of drilling them and furnishing all kinds of Pumping and Water Supply Plants, Complete? Our long experience will put money in your pocket.

TANKS, PUMPS, WIND MILLS, Wood Saw Tables, RAMS.

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For sale: bale 16x18 any length: price, \$100. 10 H. P. ENGINE AND BOILER on sills: price, \$800, f. o. b. cars. Both outfits good as new.

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SEND FOR FREE BOOKLET No. 9
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ALFALFA is now attracting much attention everywhere. Do not forget that Alfalfa needs heavy doses of **POTASH** to insure successful growth.

We have a book which is full of valuable information to all farmers who are experimenting with Alfalfa, and will gladly mail it free of all cost to any one who will be good enough to write for it.

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ANALYSES:

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OLIVER SMITH COMPANY,
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of MINERALS, FEEDING MATERIALS,
WATER and other products made at reasonable rates. Correspondence solicited. J. B. WEEMS, Ph. D., Crewe, Va., Expert in Agricultural and Industrial Chemistry.

BAGS

FOR EVERYTHING:
NEW OR SECOND-HAND;
SOLD OR RENTED.
Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.

A STRIKING PROOF OF THE GREATNESS OF OUR COUNTRY.

Our country is so great that a primacy in supplying its demand for even small things in the aggregate brings large success. This is well exemplified in the vast strawberry plant business built up by the Continental Plant Company, Kittrell, N. C. Beginning a quarter of a century ago, they were pioneers in seeing that they could afford to sell direct to the people for cash, as low or lower, than others sold at wholesale, because the people paid cash with order and there was no lossage in bad debts as in a wholesale business, which is largely credit business, besides there were no agents' and dealers' profits. They have now added a Fruit Tree and General Nursery business, selling all such things direct to the people so low that no matter how far they live they cannot only save half by dealing with them but get strictly first-class trees, plants, etc. They will be glad to send their magnificently illustrated catalogue free. See their "ad" in this issue.

A RELIABLE HAY PRESS.

The "Big 4" Hay Press, manufactured by the DeLoach Mill Manufacturing Company of Atlanta, Ga., Box 600, is meeting with a remarkable sale.

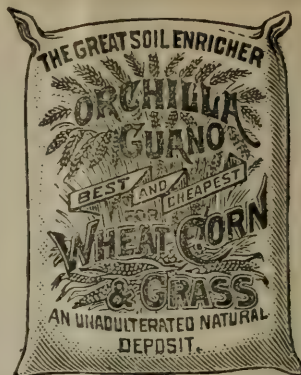
With one good horse it will bale two tons of hay per hour, and keep it up just as long as you wish to run it.

Still another desirable feature of the Hay press is its great ease of running. An ordinary hay press would soon tire a horse and then there would be lost time while the horse was allowed to rest. One horse can easily do the packing on the "Big 4" Press, and walking at a speed of two and three-fourths miles per hour, the press makes four revolutions per minute and four 16-inch strokes to the revolution. This gives in the smaller size machine an easy capacity of sixty 70-pound bales per hour, each bale being 14x18x36 inches.

The machine has automatic feed, also automatic hopper. It is horse power and belt power combined. A four-horse power press can be converted into a belt power press at an extra cost of only \$20. For rapid and perfect work it stands far in the lead, and when you figure that it sells at only half the price of other balers it will not take you long to decide that the "Big 4" is the press for you. The DeLoach people will be glad to send their catalogue free to any of our readers. Better write for it to-day.

PATENT PROCESS FERTILIZER LIME.

The Walton Quarries, Harrisburg, Pa., are sending out a booklet descriptive of this product of theirs. Look up the ad. and send for the booklet.



FOR SALE BY

DIGGS & BEADLES, Inc.
SEEDSMEN,
RICHMOND, - VIRGINIA.

Canada Unleached

Hard-Wood Ashes

are the best general fertilizer and land tonic; \$1.50 per 200 pound bag, \$14.00 per ton. We import the pure goods only and guarantee quality.

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ESTABLISHED 1904.

TRIUNE FRUIT —AND— PRODUCE CO.,

General Commission Merchants,
24 Roanoke Dock,
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EGGS, POULTRY, FRUIT and PRODUCE

Market quotations and stencils furnished free on application.

Reference: Mercantile Bank, Norfolk, Va.

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SEED

Ruta Baga, Kale and Spinach,
Cold Storage Potatoes, Cow
Peas and Millets, Crimson
Clover and all Field and Gar-
den seeds.

DIGGS & BEADES, Inc.

SEEDSMEN.

Richmond, - Virginia.

THE FONTAINE SHOCK BINDER.

We invite the attention of our readers to the advertisements of the Fontaine Co. and Mr. A. L. Smith, both of whom, as makers and General Agent, are advertising this cheap and useful device. As farmers will shortly be thinking of corn harvesting, they should investigate the merits of this little binder. It dispenses with the labor of two men in shocking corn and makes altogether a better and more substantial shock, rendering it waterproof in the bargain. Look up the ads and send for descriptive pamphlet and testimonials of users.

THE REMEDY IS ALL RIGHT.

The following is a copy of a letter containing an order for an additional quantity of Hog Remedy just received by Dr. Jos. Haas, of Indianapolis, Ind.:

Dr. Jos. Haas, Indianapolis, Ind.:

Dear Sir: I wish you to send me another shipment of your Hog Remedy, forwarding same by express at once. My hogs are getting along all right and your Remedy is all you claim for it. In order to keep my hogs in a healthy and thrifty condition, I wish to continue to feed your Remedy, for since I began using it there has been such a change in their condition that I never intend to be without it in the future.

Yours truly,

M. A. SHANKLIN.

Dukedom, R. R. 3, Tenn.

CURES BOG SPAVIN.

Corona, L. I., N. Y., Nov. 13, '04.

9 Locust St.

Dr. B. J. Kendall Co., Enosburg Falls, Vt.:

Gentlemen: Please send me a copy of your "Treatise on the Horse and His Diseases." I have two horses which had Bog Spavin on both legs. I have treated them with Kendall's Spavin Cure, for two months and find the spavins cured. I spent considerable money on veterinaries until a friend of mine recommended Kendall's Spavin Cure, which I am satisfied will cure any case.

Yours truly,

EMIL LINDERMAN.

EQUAL OF CAUSTIC BAISAM CAN NOT BE FOUND.

Portsmouth, Va., Jan. 23, 1904.

The Lawrence-Williams Co., Cleveland, O.:

I use your Gombault's Caustic Balsam for blistering and its equal cannot be found. I never use any other.

P. C. CODD, V. S.

POCKET MANUAL OF PLANT DISEASES.

Mr. James Good of Philadelphia, will send to all applicants, free of charge, the above useful pamphlet. Mr. Good has long been an advertiser in our columns and his Whale Oil Soap is well known by thousands of our readers.

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ELIZABETH COLLEGE
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The State offers free tuition for worthy young women who wish to prepare themselves for teachers.

Liberal Courses in Language, Literature, Science and Manual Arts.
Strong professional Course with Normal Training.

Excellent improvements embodying the best features of

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are to be ready for the next session.

The Faculty has been strengthened by the appointment of several graduates from leading American Universities.

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Nearly 2 score years we have been training men and women for business. Only business college in Va., and second in South to own its building. No vacation. Catalogue free. Bookkeeping, Shortland, Pennsylvania by mail.

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"Feeds and Feeding"

Prof. Henry's Great Book for
Farmers and Stockmen.

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With the SOUTHERN PLANTER, 2.25

WILL PAY \$10.00 PER WEEK.

to farmers, their wives, sons or daughters for portion of their time. J. T. FLOURNOY, Jersey City, N. J.

THE NUT NURSERY COMPANY,

MONTICELLO, FLA.

Growers of choice varieties (by budding and grafting) in the more important species of Nut bearing trees, which are of value to planters in this country. Extensive propagators of the Improved Large, Paper and Soft Shell varieties of Pecans. Write for catalogue.

J. F. JONES, Manager.

PETERSBURG SEED-HOUSE

SEEDS for FARM and GARDEN. Plants, Grape Vines, Fruit and Ornamental Trees, Fertilizers, Insecticides, Sprayers, etc.

Our Seeds are true to name and tested on our experimental farm near the city. Write for catalogue.

W. GROSSMAN, Petersburg, Va.

Roses! Roses!

COLD GROWN, OWN ROOTS, EVER-BLOOMING, and the best of ALL STANDARD sorts, including RUNNERS. We grow NOTHING BUT ROSES and furnish them at ALL SEASONS in the condition that the SEASON and CLIMATE require. Write for free catalogue, containing full directions for ROSE CULTURE. We are anxious to please everyone, and especially those who cannot visit us, and make their own selections. MERIT ROSE CO., Richmond, Va.

CELEBRITY

Plants, very strong, \$1 per 1,000; \$4 per 5,000; 70c. 600. The plants have an average of 4 square inches of space each over the whole field. GIANT PASCAL, WINTER OF EN, GOLDEN HEART, FRENCH, GOLDEN SELF BLEACHING, CAULI-FLOWER PLANTS. Plants carefully packed. Shipped in damp moss. I ship to all the New England and Middle States. West as far as Iowa and South as far as Florida. F. W. ROCHELLE, Chester, N. J.

Northern Virginia Farms

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 16-130 acres; 20 in timber, balance cleared. Good land, in good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$20 per acre.

No. 49-133 acres: one mile from town, on fine McAdams road. Nice 7 room house, 3 porches. Good well and springs. Good barn, with stalls for 10 cows and 5 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land sandy loam and clay. Two acres in orchard; trees in full bearing. Price, \$8,000.

No. 41-20 acres: 10 miles from Washington, D. C.; 2 miles from an electric and steam railroad. Thirteen room house in nice shady lawn. Well at house. Nice orchard, in full bearing. All necessary out-buildings in good repair. Price, \$3,500.

No. 43-30 acres; an elegant brown stone house, with 6 rooms, 3 porches. Three acres in orchard, in full bearing. All necessary out-buildings, in good repair. A large stone mill building, with 2 sets of corn burrs, has 23 foot water fall. Situated in a thickly wooded and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$3,200.

No. 47-100 acres; 2 1/2 miles from railroad; 50 acres cleared, all level and in fine state of cultivation. New 5 room house. Stable for 4 horses and 6 cows. Young orchard. Good well at house. Situated on popular dirt pike, in Loudoun county. Price, \$2,500.

No. 59-480 acres in Loudoun county, in the best grazing section of the State, all in grass; 12 room residence, situated on elevated ground in a large shaded lawn. An elegant large orchard in full bearing. Stabling for 60 cattle, farm grazed and fattened 65 export cattle each season. Well fenced, and an abundance of running water. Price, \$44.00 per acre.

No. 62-636 acres excellent grazing, cleared land, well set in grass, and a little rolling. 20 room residence, oak timber, balance of land cleared. Nine room house, 20x40, 20x40, sheep house 20x50, and all the usual farm houses, all in good repair. Large orchard of all kinds of fruit, in full bearing. Farm watered by springs and streams; in some of the fields; land is all well fenced; has now about 40 large cattle, in addition to sheep, horses and colts. Price, \$16.00 per acre. Easy terms.

No. 63-516 acres, natural Blue Grass land; well fenced; elegant well water. Good 5 farm houses in good repair; Good sheep barn 20x40. Thrifty young orchard of apples, peaches, pears and cherries. Land is all in corn now. Close to schools, church, mill and post-office. Four miles from railroad. This farm usually sends off from forty to fifty export cattle in September. It is located in a beautiful section of the country in Loudoun, 25 miles from Washington, D. C. Price, \$15.00 per acre; one-third cash.

No. 74-contains 25 acres, 1 1/2 miles from town, in Loudoun county, divided into three fields; land is smooth and level and well improved; about 100 fruit trees; apples, peaches and pears-in full bearing; good 10 room dwelling, barn 20x50, stable and other small outbuildings, in good repair. Located on good road; half mile to school, church and post-office. Price, \$850.

No. 66-Large farm, near mill, new process, all modern improved machinery, cost about \$14,000, situated in one of the finest grain sections of Northern Virginia, two and one-half miles from railroad. In full bearing in ordinary seasons, but fitted to give a splendid baffle and engine to aid power in the event of a drought. For sale to settle an estate. Write for full description. Price, \$7,500.00, on very easy terms.

Write for full information and price list of other farms.

W. E. MILLER, Herndon, Va.

LAST CALL FOR SUMMER SALE AT BILTMORE OF JERSEYS AND BERKSHIRES.

By the time this goes to press the catalogue of the great two-day sale of Berkshires and Jerseys of the Biltmore Farms will be about ready to mail out. They contain very interesting photographs of the animals offered and certainly a more detailed description of the animals than has yet been attempted, with very few records of the performance of all ancestors.

As announced previously, the farms have promised to put their best in this sale, and it certainly looks as if they have done so as the guaranteed descriptions certainly call for very fine animals, and the breeding is of the very richest. A large number of heifers are out of the very best cows in the Jersey world; such cows as the two sensational daughters of Golden Lad: Golden Beatrice and Golden Rosebay, Imported Harrowgate the dam of the Junior Champion at St. Louis to whom there is a full brother now offered just right to show in the under-a-year class, and then there are some great combinations of young heifers by Golden Lad's Successor, and out of the greatest milking daughters of Trevarth.

Biltmore Farms are doing a large and profitable dairy business, and persistent milking is a result of their long experience. They have already 34 cows that have yearly milk records running from 8,000 to 11,000 pounds of milk, and these under not very favorable conditions as it is not in the best of grass sections, and their pasturage is so limited about the main dairy that a certain amount of soiling has to be done all the year. Of course these cattle are absolutely healthy, being not only free from tuberculosis, but also what is still more dangerous to have in any herd and more prevalent, contagious abortion.

These farms say that they are not going to show in the future, and they are therefore including the best of their young heifers and bulls, most of them dropped in September and October, and many of them certainly promise to be outstanding winners in the strongest classes. The imported cows and heifers offered are of the most profitable and prominent Island families, being daughters of Golden Lad 2d, Golden Fern's Lad, Napoleon Bonaparte, Golden Jolly, Agatha's Flying Fox, etc., and as they are thoroughly acclimated and have not been put through any special preparation for sale, they can be relied upon to take right hold of their feed and conditions in their new homes and prove satisfactory investments.

The Berkshires are quite on a par with the previous offerings, although in addition to the young sows a few choice boars have been added that are just right to use or to show. There are some sensational offerings among these, and whilst it is needless to say much about them, as the buyers will



VIRGINIA FARMS

As low as \$5 per Acre

with improvements. Much land now being worked has paid a profit greater than the purchase price the first year. Long Summers, mild Winters. Best shipping facilities to great eastern markets at lowest rates. Best church, school and social advantages. For list of farms, excursion rates, and what others have accomplished, write to-day to

F. H. LABAUME, Agr. and Ind. Agr., Roanoke, Va., Dept. Y.



VIRGINIA AND THE PLACE TO FIND THE BEST HOMES

Where Health, Climate, Soil, Location and Markets are unsurpassed. Any fine Place and price to suit the buyer of a stock truck, fruit, poultry or fish and oyster farm. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 35 p. pamphlet giving full particulars.

W. A. PARSONS,
C. & O. Main St. Depot, - - Richmond, Va.
ESTABLISHED 1875.

I Can Sell Your Real Estate or Business, NO MATTER WHERE LOCATED.



Properties and business of all kinds sold quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same.

A. P. TOME WILSON, Jr.,

Real Estate Specialist,

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Va. Stock and Truck Farm

FOR SALE: 3 1/2 miles from city of Danville, splendid residence, 3 large stock barns, silos, etc.; 20 acres orchard, 250 acres well improved, also 30 acre tract one-third in wood; 5-room dwelling, barns, etc.; 1/2 mile from store and school. Price, \$20 per acre. Easy terms. Sold to settle estate.

R. E. HARDY COATES, Esq.,

R. F. D. No. 1, Danville, Va.

FINE FARMS in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address
ALBABLE IMMIGRATION CO.,
JAN'Y B. Woods, Free Charlottesville, Va.

soon find out what they want when they see them, we can't help mentioning the young Melody sows dropped in September, and just right to show in the yearling class, and that are the best lot of young sows out of one dam that the farms have ever had, and also some young boars and sows out of Hurricane 2d, that truthfully represent Biltmore Farms' ideal of a good Berkshire, whilst they have good points, and are not overdone they are nearly as active as a scrub, and certainly more hardy. Anybody that wants to complete their show herd will certainly have a good chance here, as a good many of the young sons have been bred to come in in September and breed next year's winners. Any of these young sows will be kept, free of charge, until cool weather, should the heat interfere with prompt shipment. The blood lines used at Biltmore Farms are too well known to make any mention of.

Catalogue will be sent to anyone applying.

The splendid conformation and healthy condition of the offering is what they principally want to draw attention to, and the fact that a majority of these sows contain all the finish of their directly imported ancestors, will prove much more hardy and profitable. Something like 20 per cent. of the gross receipts of the last year's sale had to be refunded the buyers because the sows did not prove fertile. In our last February sale which was made up of the descendants of these, all the sows proved breeders but one and were shipped out, a most remarkable record, and one worth considering.

A BARGAIN IN DENTISTRY.

When Congressman John Sharp Williams visits New York he never fails to look in at a small kindling-wood shop presided over by an old negro who was formerly a retainer in the Williams family. On his latest call he found the old man unhappy.

"What's the matter, Lefe?" asked Mr. Williams.

"I've just been done out o' some money, Marse John, and that's mattenough," replied the negro. "Had a terrible misery in mah tooth and went to a dentist and got it pulled, and he chaged me a dollah, a whole dollah."

"Why, once down in Tess's see I went to ole Doc Tinker, and he pulled two toofs and broke man lawbone, and only chaged me fifty cents. I've been buncoed."

THE GREAT ROANOKE FAIR.

Mr. Cyrus T. Fox, Mgr. of the Roanoke, Va., Fair is sending out announcements of the forthcoming exhibition which takes place September 26th to 29th inclusive. The premium list will be a very attractive one and will be out shortly. Send him your name for a copy.

Genetic Farms in Northern Virginia. Near the great markets.

No. 1. Fine fruit farm; 100 acres, in the corporation of Fairfax. Has 1,000 peach trees, 4,000 of the very best grape vines, and all other kinds of fruit and berries. 9 room frame house, large frame barn and all out-buildings and well. Stream through farm. Just one mile from electric cars. The trees are all in full bearing, and the fruit will pay for the place in a short time. This is a bargain. Price, \$6,500 cash.

No. 4. 100 acres, one of the finest farms in Virginia, in the very best of cultivation; fine, large 12 room house, large halls and cellar, water in the kitchen, beautiful lawn surrounded by hedge, all kinds of fruit and berries; very large barn and all out-buildings; first class fence all around the farm, divided in fields for pasture, meadow, etc.; stream through the farm; near the town of Vienna. Price, \$17,000; part cash, balance to suit. Would take city property in part pay.

No. 6. Fine dairy farm, 45 acres, all clear and in high state of cultivation; three-fourths of a mile from Vienna; steam and electric cars, stores, churches, mill and school; 12 room house, 2 large barns and all necessary out-buildings; 2 good wells; all kinds of fruit and berries. Price, \$6,000; terms to suit.

No. 7. Good dairy farm of 102 acres, in cultivation and grass; all kinds of timber; well water; 12 room house, 2 large barns, barn 35x50; well fenced; all necessary out-buildings; one and one-fourth miles from railroad station, school and mill; all kinds of fruit. Price, \$3,000; \$1,000 cash, balance to suit.

No. 8. Nice home and farm of 50 acres; 40 acres clear and in high state of cultivation; in timber; 2 room house, barn 14x16, and other necessary buildings; well of water at door, spring near by, and stream through place; all kinds of fruit; 2 miles from Fairfax, school, church, stores and electric cars. Price, \$3,750, on easy terms.

No. 11. 450 acres; 350 in cultivation, balance in fine timber; 9 room house; well at door; spring near by, stream through place; 10 large barns; all other necessary buildings; also tenant house. This is a fine farm for dairy and stock, one and one-half miles from Clifton Station, on Southern Railroad; school, church and stores. Terms, \$30 per acre; one-third cash, balance to suit.

No. 12. 16 acres; 14 acres cleared, balance in timber; 2 room house; barn 14x16, and other out-buildings; spring near by; all kinds of fruit; near school, church and store; three and one-half miles from electric railroad. Price, \$525; terms to suit.

No. 13. 100 acres; 100 cleared, balance in oak timber; 3,000 peach trees and other kinds of fruit. 6 room house; barn 30x40; all other buildings necessary; one-half mile from railroad, school, store and church. Price, \$6,000; one-half cash, balance to suit.

No. 14. 20 acres; 14 acres cleared, balance in oak timber; 50 pear, 100 peach, and 100 apple trees; stream through place; near Fairfax; stores, church, school and electric railroad. This is a fine place for a hennery or apary. Price, \$1,200, on easy terms.

No. 15. 27 acres of fine land; suitable for subdivision, as it is so near the electric railroad. Has fine building sites, in the Corporation of Fairfax. Near school, church and store. Price, \$2,700; one-third cash, balance to suit.

No. 16. 148 acres; 75 clear, balance in all kinds of timber; 10 room house, mill, barn, hen house, and meat house; is well watered. Good fences; all kinds of fruit; 3 miles from Fairfax and Clifton Stations. Mill near place. School, church, near school. Price, \$5,000; one-half cash, balance to suit.

No. 17. 125 acres; 65 clear and in good condition, balance in all kinds of timber; 7 room

house; good barn and all other necessary buildings; water in every field; good fences; all kinds of the very best varieties of fruit; 3 miles from Fairfax and Clifton Stations; near school and church; mill adjoins farm. Price, \$2,500; \$1,000 cash, balance to suit.

No. 18. 120 acres; 12 acres clear, balance in all kinds of timber; 10 room house; stable; spring and running water; partly fenced; half mile from station, school, church and store. Price, \$11 per acre; one-half cash, balance to suit.

No. 21. Very cheap farm of 100 acres; 90 cleared and in cultivation, balance in timber; 7 room house; small barn and cow shed; water in every field; good fences; all kinds of fruit; 1 mile from church, school and store, 3 miles from railroad. Price, \$1,800; terms to suit.

No. 24. 70 acre tract, 21 acres: one-half mile from Oakton and electric railroad. Price, \$50 per acre, cash.

No. 25. 44 acres; 38 acres clear, balance in timber; good 9 room house, with cellar; barn 30x24; large shed, corn house, hen house and carriage house. Lasting water in every field, and good spring near house. Fenced with wire and rail; in the town of Legato; near school, church, store and post-office; 3 miles from electric railroad. Price, \$2,500; terms to suit.

No. 26. 31.2 acres of fine land under high state of cultivation; 7 room house, with water, bath and sink; summer kitchen with water, bank barn 16x30; all necessary out-buildings; 30 acres of trees in the woods. Place well fenced with wire; beautiful lawn, with abundance of shade trees and shrubbery. Price, \$4,000; \$1,000 cash, balance to suit.

No. 33. 150 acres; 75 cleared, balance in timber; 4 room house; small barn and other buildings; well watered; all kinds of fruit; good fences; near school, church, store and post-office; 5 miles from railroad. This is a cheap place. Price, \$1,500; one-half cash, balance to suit.

No. 40. 37 acres; about 10 cleared, the balance in pine; 6 room house; spring near, two streams through the place; partly fenced; some apple trees; one-half mile from school and church, two and one-half miles from railroad and store. Price, \$500. Terms: \$150 cash, the balance to suit.

No. 50. Over 200 acres; 100 cleared; large new house not finished; a noted fine spring; stream through the place; a mile from Legato, on Warrenton pike; one and one-half miles from Centerville, school, church and store. Price, \$500. Terms to suit.

No. 55. 140 acres; 70 clear, the balance in all kinds of timber; 5 room house, barn 20x40; fine spring water through the place; all kinds of fruit; 5 miles from railroad, and 3 miles from electric railroad; three-fourths mile from school, church and store. Price, \$2,000. Terms: one-third cash; the balance to suit.

No. 73. 147 acres. 25 clear, balance in timber; 1 mile from store, post-office, etc.; one-fourth mile from school. Price, \$1,100. Terms \$500 down, the balance to suit. This property is in a nice neighborhood. I think it is a great bargain.

No. 78. In Prince George county, Md. 51 acres; 5 room house, small barn, and other out-buildings. 7 miles from Washington, D. C., and 5 miles from electric car. Price, \$2,000.

No. 97. 200 acres; 50 clear, and balance in timber; has a good building site; could be made a nice farm; one and one-half miles from Fairfax on the pike. Price, \$25 per acre, on easy terms.

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Uses for Lemon.

Lemons are a rectifier in cases of colds, liver complaint and biliousness. As a garnish for fish, salad, game and other dishes, they have no equal. Mix equal proportions of lemon juice and glycerine to moisten the lips of a fever-parched patient. Add five drops of juice to the water with which you brush the teeth. It will remove the tartar and sweeten the breath. A refreshing and appetizing dish for an invalid is made by mixing the juice of one lemon with the well-beaten white of an egg, to which has previously been added two teaspoonsful powdered sugar. If a lemon is kept on hand with which to rub away stains on the nails or hands, they will quickly disappear. Salt and lemon juice will remove rust stains from linen without injury to the fabric. Dried lemon peel sprinkled over coals will destroy any disagreeable odor about the house.—Exchange.

Uses of Turpentine.

Turpentine, either in resinous form or in spirits, has a household value. A child suffering with the croup or any throat or lung difficulty will be quickly relieved by inhaling the vapor and having the chest rubbed until the skin is red, and then being wrapped about with flannel moistened with the spirits. Afterwards sweet oil will save the skin from irritation. In the case of burns and scalds turpentine has no equal. It is the best dressing for patent leather; it will remove paint from artists' clothes and workmen's garments; it will drive away moths if a few drops are put into closets and chests; it will persuade mice to find other quarters if a little is poured into mouse holes; one tablespoon added to the water in which linens are boiled will make the goods wonderfully white; a few drops will prevent starch from sticking; mixed with beeswax it makes the best floor polish, and mixed with sweet oil it is unrivaled as a polish for fine furniture—the latter mixture should be two parts of sweet oil to one part of turpentine. Some physicians recommend spirits of turpentine, applied externally, for lumbago and rheumatism. It is also prescribed for neuralgia of the face.

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DR. W. D. OUZTS.

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By an experienced and up-to-date farmer as manager of a large estate; best references. Address "PLANTER," Elk Hill, Va.

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Wanted; only those with successful experience need apply; state age, experience and salary expected; must be sober and industrious and able to furnish first-class references.

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5050 Plain Blouse or Gimp.

32 to 42 bust.

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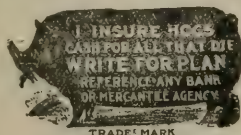
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The dress is made with waist and skirt. The waist consists of front back and portions, and is with the bertha shirred and arranged over the lower edge of the yoke, which serves as a stay. The sleeves are full puffs of elbow length and the skirt is straight with a straight gathered flounce joined to its lower edge.

The quantity of material required for the medium size (12 years) is 6½ 27, 6½ yards 22 or 4½ yards 44 inches wide with 7½ yards of lace and 12 yards of insertion to trim as illustrated.

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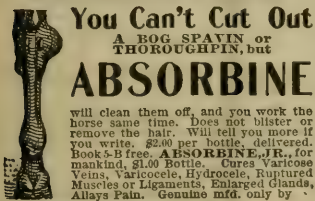
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General Directions for Preserving, Canning, Etc.

In the first place it is a matter of great importance that the fruit, berries, vegetables, etc., should be of uniform ripeness and size, and that there should be no bruised ones. The most perfect fruit necessarily makes the most perfect preserve, but more especially is care to be taken in canning pears, peaches, apples and quinces, and these should be peeled with a silver knife if possible, and either dropped in cold water or rubbed over with lemon juice to prevent discoloration. For preserved peaches you will need only three-quarters of a pound of sugar (and keep them in glass jars). For other fruit pound for pound is necessary. The syrups should be made first with just as little water as you can manage with and the fruit dropped in and let it stay in the syrup for a very little while, just to come to a boil, then take out with a perforated skimmer, lay on dishes in the sun and let it cool. The syrup boils all the time. Return the fruit to the syrup and boil till tender and clear. Sometimes it is necessary to take the fruit out several times to prevent its falling to pieces. Of course this is when you want the beautiful, whole, clear preserves; where you are making it for ordinary use so much trouble is unnecessary. We frequently let the pears and apples boil in the syrup till about half done, then take the kettle, a porcelain kettle, off and set it away till the next day, then finish it, taking out the fruit and letting the syrup boil down if there is too much of it. Where there is a surplus of syrup, bottle and sell it or put it in jars and screw tight. It makes a delicious sauce for cake or used with breakfast cakes in the winter. To preserve apples make a ginger tea and use it for making the syrup; this gives a variety. For pears a few whole all-spice and cloves are a delightful addition. Pears are apt to be insipid without something added to season them.

To can apples, pears and peaches, prepare them as for preserving; try to keep the pieces as even and as large as possible. The proportion of sugar is about one cup of sugar to one cup of water and one quart of fruit. There are two processes, one by boiling the fruit and packing it into the cans, screwing on the top as tight as possible while the contents are boiling hot. The other is to pack the fruit into the jars before you cook it, fill with cold water and set the jars lightly covered in a boiler and cook until they are come to a boiling point, longer if you want the fruit tender. Screw the top on before you take the jar out of the



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Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

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HANNAH C., foaled 1902. Bay filly by Aurora, Kathleen Gray, by Jim Gray; 2d dam, Katie C., by Imp. Charaxus. I also have others from one to two years old, by Imp. Waterlevel and Imp. Potentate. None of them have been trained or raced. S. H. WILSON, Byrdville, Va.

Pair of Horses

wanted in the fall; must be farm raised, Virginia horses, free going, thoroughly broken for ladies driving, either single or double, sound, medium size, about 6 years old, fit for light work. Will deal with owner and not a dealer. Mrs. R. M. SMITH, Cousins Island, Maine.

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Strictest personal attention to all kinds of stock.

Shropshire Sheep

Flock of 25 Ewes, good proportion registered and others high grade, with 3 yr. old Buck, 2 yearling Bucks, and 4 Buck Lambs, and 6 Reg. Ewe Lambs for sale at farmers' prices. Apply to

DION K. KERR, Mgr. Antrim Stud,
Warrenton, Va.

SHEEP=WHEAT

Few BREEDING EWES, grade Shropshire, cheap; 2 SHROPSHIRE BUCKS, 3 years old (200 pounds each); 200 bushels pure Huskaster seed wheat clean; 1 Keystone Fertilizer and Shredder. JO. HARDIE, Brown Summit, N. C.

water. If your jars are glass put a whisk of hay or some slats of wood in the bottom of the boiler, else the contact with the iron will break the jar. You will be wise to screw down the tops of all canned fruit the day after you put it up, as this insures the keeping.

To make jelly do not peel the fruit but wash it in two waters and chop it up, leaving the seed and core. Quinces and apples may be covered with water. Peaches and pears have less jellying matter in them and must have nearly half as much and with pears you will be obliged to put nearly half as many apples as pears to make it jelly at all. Grapes may be jellyed when green or nearly ripe and they may be nearly covered with water. All must be boiled until they drop to pieces and then turned into a bag to drip without pressing. The first that runs off is always clearest. So it is well to change the vessel in which it is dripped, making it in two kettles. The rule is one pint of juice and one pound of sugar. The sugar must always be heated and put in only a few minutes before you take the jelly off, if you want a light colored jelly. It should boil from twenty to thirty minutes from the time it begins to boil, putting in the sugar about ten minutes before it is done. It is harder to make jelly on a rainy day, and the fruit should never be over-ripe. Fill the jelly glasses as full as possible and set them in the sun for a few days before sealing. Cut a piece of white paper the size of the top of the glass and dip it in good whiskey or brandy and press it down on the jelly to prevent moulding, paste a piece of paper over the top and then put the tin top on and your jelly will keep indefinitely.

In all your operation nothing is so important as absolute cleanliness. The jars should be dipped into boiling water just before they are filled, the top and rubber treated to the same bath, all should be at the boiling point when you screw on the top and that must be done as tight as you can get it, and you will never lose a jar.

Green Tomato Pickle.

One peck of green tomatoes sliced, one dozen green peppers, eight large onions sliced, sprinkle about a cup and a half of salt on these and hang in a bag all night. In the morning press the water out and put in a kettle with one-fourth of a pound of white mustard seed, one-fourth of a pound of black mustard seed, one ounce of celery seed, one teaspoon of cloves, allspice and cinnamon, two pounds of sugar, and one gallon of good vinegar, boil slowly till the tomatoes are done. It takes some weeks for this to be ready for use.

HUCKLEBERRY PRESERVES.

These are rather insipid, yet they are very much liked by some people, and make a variety. When you use glass jars and new rubbers you need only use half pound of sugar to each

REGISTERED

Shropshire Sheep

FOR SALE. One 3 year old Ram out of Imported Stock, 1 Yearling Ram, 3 Ram Lambs and two 4 year old Ewes. Prices right. H. R. GRAHAM,

Chestertown, Md.



Essex Pigs and Southdown Lambs.

Some fine Essex Pigs, March farrow, also July pigs for September delivery. Choice Southdown Lambs. Your orders solicited.

L. G. JONES,

R. F. D. No. 1, Tobaccoville, N. C.

Dorsets

Woodlawn Farm has a few of the best rams it has ever offered. Wool is an item worth considering this year, and our rams are exceptionally heavy shearers, besides having excellent mutant forms. J. E. WING & BROS. Mechanicsburg, O.

JACKS

SADDLE HORSES & POLAND-CHINA HOGS
Young stock always on hand and for sale.
Seventy-five March pigs. They are beauties.

J. F. COOK & CO.,
Lexington, Ky.



Jacks, Jennets and Mules.



A fine lot of Kentucky bred and big black Spanish jacks and jennets. Also mules, match teams, one to six years old. Write or see me before you buy. Come to Kentucky if you want a good Jack.

KENTUCKY JACK FARM, JOE E. WRIGHT, Junction City, Ky.

WANTED!

ALL KINDS OF

LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

DR. CECIL FRENCH,

718 Twelfth St. N. W., Washington, D. C.

PRESERVE

Eggs For Winter.

Experience has proved that Water Glass is the most satisfactory material for preserving eggs. No change in the quality of the eggs at the end of a year. For prices and other information write to J. B. WEEMS, Crews, Va.

75 BROOD EWES

Some Grade Southdowns and 4 bucks for sale. Turners on C. & O. Ry., or write Dr. C. Martin, Edge Hill Farm, Roxbury, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

GLENBURN BERKSHIRES



In this herd are twelve really bred IMPORTED animals. Also selected American bred stock. OUR IMPORTED boars Hightide Royal Victor and Loyal Hunter won first at Eng. Royal and Va. State Fairs, respectively. A splendid lot of pigs of gilt edged breeding now ready for shipment. Dr. J. D. KIRK, Roanoke, Va.

MAPLE GROVE

BERKSHIRES

THE BEST BRED and BEST INDIVIDUALS I ever offered the public. Try me with an order and see if I don't send you something good.

J. W. McFADDIN,
R. F. D. No. 1, Raphine, Va.

BERKSHIRE BOARS.

I offer some exceedingly choice young boars for sale; by Imported Danesfield Tailor, 7694 and out of Biltmore bred sows. It will be hard to find better or cheaper stock.

HENRY WARDEN, Fredericksburg, Va.

WALNUT GROVE FARM,

SHAWSVILLE, VA.

Orders now taken for pure-bred

BERKSHIRE PIGS

to be delivered after December 1st. None but the best will be shipped, others go to the pen. One two year old Hereford Bull, registered, for sale, a perfectly formed animal, and as well bred as America's best. Address all communications to W. J. CRAIG, Mgr., Shawsville, Va.

Large English

BERKSHIRES

Sired by Imported Boar, Junction Chief, 78320, for sale. Prices low, quality considered. MELROSE FARMS, Casanova, Va.

PURE-BRED

Berkshire Pigs

2 mos. old, \$4 each; \$7 per pair; out of pure bred sows and by registered boars. Delivery Sept. 1st.

H. SWINEFORD,
1110 E. Main St., Richmond, Va.

BERKSHIRES

LORD PREMIER, PREMIER LONGFELLOW, GOV. LEE and JACK OF ALL TRADES strains. BEST ENGLISH and AMERICAN BLOOD. Pigs at prices you can afford to pay. BOYD C. FUGATE & BRO., Fugate's Hill, Russell county, Va.

Berkshire Pigs

Hawkesley Stock Farm has them of the best breeding; fine individuals. J. T. OLIVER, Prop., Allen's Level, Va.

pound of the berries. One pint of water to every four pounds of fruit. Boil the water and sugar for a minute, then drop the fruit in and let the whole boil about twenty-five minutes. Pack into the jars at once and seal while boiling hot.

Pear Pickle.

Peel the pears, and if they are small leave on some of the stems, if large they must be cut into quarters. They should be ripe but firm. To eight pounds of fruit allow four pounds of sugar, make a syrup of three pints of vinegar, four pounds of sugar, fill a cup with equal parts of cinnamon, allspice, cloves, mace, and add to it four pieces of ginger; bring the syrup and then put the pears in and boil them till they are tender. Do not let them drop to pieces. If they are very ripe only let them stay in a few minutes and repeat the cooking three or four days.

Ripe Canteloupe Pickle.

Few pickles are more tempting than that made of the ripe canteloupe and it is not very troublesome. Peel off the rough outer skin of the melon and cut off the soft pulpy part of the inside leaving the firm ripe meat. Pour over this very hot water in which is dissolved a small piece of alum and a little salt. Let it stand in this till it is cold then put them into clear cold water for a few hours. Make a syrup of two quarts of cider vinegar, eight pounds of sugar, one ounce of mace, one ounce of allspice, half ounce of cloves, one ounce of cinnamon, one ounce of ginger, a teaspoon of celery seed and a very few grains of white pepper. Into this put fourteen pounds of the canteloupe, and let it boil five minutes. Set it aside in the kettle and the next day let it come to the boiling point, then take out the melons and boil the vinegar a few minutes, pour it over the melons and repeat the process two more mornings. This must be kept four months before it is good for use.

Chow-Chow (The best).

To make two gallons of this take half peck of green tomatoes, two large heads of cabbage, one dozen large onions, two dozen large cucumbers, chop all these ingredients fine and sprinkle a pint of salt about in them and hang up in a bag all night. Press out the water in the morning and cover with vinegar in a kettle with one pint of grated horse radish, one pound of white mustard seed, one ounce of celery seed, one dozen very small onions, half cup of ground black pepper, two ounces of turmeric, a tablespoon of cinnamon, two pounds of brown sugar. Boil for two hours and put in stone jars.

CARAVEN.

New York, 5-31-05.

I have read a great many agricultural papers, magazines and journals, and find the Southern Planter more up-to-date and far more instructive than most of the others.

R. J. CASHMAN.

POLAND-CHINA PIGS.

Some fine ones young sows, bred, young boars and pigs. No better breeding in the United States. My herd boars have been sired by J. H. Sanders, Lookmoover, Perfect I Know, Proud Perfection, Corrector, and High Roller, the greatest prize winners of the breed—my sows have been as carefully selected.

RED POLLED CATTLE. Fine, good young bulls. Will sell a few cows and heifers. ARROWHEAD STOCK FARM, Charlottesville, Va., SAM'L B. WOODS, Propr.

POLAND-CHINAS

with the BUSINESS HAM.



Large, mellow, easy keepers. Bred right and sure to please. SUNSHINE, U. S. PERFECTION and TECUMSEH blood. A few Spring pigs of both sexes, eligible to registry, for sale. A. GRAHAM & SONS, Overton, Albemarle county, Va.

Orchard Hill Pure-Bred POLAND-CHINAS.

2 brood sows bred and some nice 2 mos. old pigs for sale; also 2 fine GUERNSEY BULL calves, whose grand dams stood the advanced Registry test of 348 pounds or more in 1 year. F. M. SMITH, JR., R. F. D. 4, Charlottesville, Va.

Duroc Jersey Pigs

Of the greatest prize winning strains, correct in type and of large size. There is money in raising hogs. If you breed the right sort, THE DUROC JERSEY IS THE BEST bred for many reasons and all purposes. Write to-day and we will tell you why.

LESLIE D. KLINE,
Vaucluse, Va.

SALT POND HERD

Duroc Jerseys

PAUL J., 21255, heads the herd, with such sows as LULIE'S PET, 46434, BELLE OF SALT POND, 70454, and LADY OF VIRGINIA, 70466. Young stock for sale. S. A. WHITTAKER, Hepeside, Va.

Registered P. Chinas
C. Whites
Berkshire
strain. All ages mated
not akin, 8 week pigs,
Bred sows, Service boars,
Guernsey calves, Scotch Collie pups, and Poultry.
Write for prices and free circulars.
P. F. HAMILTON, Cochranville, Chester Co., Pa.



CHOICE

O. I. C. PIGS

from best families of Registered Blood; two and one-half to three months' pigs, \$5 each. Pedigrees with every pig. Well broken Shetland Pony, trap and harness, at a bargain. A. G. HUTTON, Lexington, Va.

MAPLEWOOD HERD Pure-Bred Berkshires.

Choice individuals. Selectly bred. Write for prices, stating your wants. JOHN F. TUCKER, Smyrna, Tenn.

Angus Cattle

for sale at attractive prices.

A few nice Heifers, 1 Yearling Bull, 1 Eight Months Old Bull and some fine BULL CALVES, all the get of our Registered Bull, MARVEL (grandson of the great bull, Gay Blackbird) and out of pure-bred cows.

Address

WILSON BROS. & CO.,
News Ferry, Va.

Rose Dale Herd Aberdeen Angus.

Top notch young registered Bulls of speciality. A few heifers to offer with bull not akin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS, Jefferson, Va.

... Registered ...

Aberdeen Angus,

Bull for sale. A splendid animal, all right in every way, fit to head any herd. For price and breeding, address L. G. JONES, R. F. D. 1, Tobaccoville, N. C.

MONTEBELLO HERD

ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va



High-Class Aberdeen Angus.

Choice males, suitable for heads of most selected herds. Send for printed description.

JOHN T. & O. B. FIANLOVE,
MILTON, IND.

ABERDEEN ANGUS BULL

coming 3 years old, for sale; fine individual, will weigh 2,000 pounds when in fair flesh.

... Also 36 Grade ...

ABERDEEN ANGUS' HEIFERS AND COWS, all bred to above Bull; none over three years old. Will sell at a bargain. Address T. H. McCLOY, Agt., Birdwood, Albemarle county, Va.

DEVON HERD. HAMPSHIREDOWN FLOCK.
ESTABLISHED 1884. ESTABLISHED 1880.

DEVON CATTLE
BULLS AND HEIFERS,
Hampshire Down Sheep,
RAMS AND EWES.

ROBERT J. FARRER, Orange, Va.

Mention THE SOUTHERN PLANTER in writing.

THE BASKET WILLOW.

Editor Southern Planter:

The market supply of the better grades of the basket or osier willow is now far less than the demand, and prices are going up. Before 1860 the basket willow was an important crop in many parts of the United States, but the invention of machinery for making ash-splint baskets almost entirely by machine work nearly killed the willow industry. Now people have found out that the cheap splintware is not only ugly, but very fragile, and is in the long run less economical than the more durable basket-willow ware. In the manufacture of light furniture the willow is rapidly supplanting the imported rattan. For the American market the willow grower should produce but one or two varieties; the best of these are the American green willow and the Caspian or Lemley willow. Both of these are naturally shrubs, and under fair care will produce the highest grade of willow rods and the heaviest tonnage per acre. The willow is very easily propagated by cuttings of the one, or two year old wood. No other method is employed. Cuttings should be about ten inches long and must be inserted their whole length straight down into the soil. The planting may be done at any time during the dormant season, but usually it is done in the early spring. The best distance apart is nine inches in rows twenty inches apart. This requires about 30,000 cuttings per acre. The reason of this close planting is to prevent branching and to secure slender rods which are the most valuable. Contrary to the usual impression, the willow is not a swamp or water loving plant. Wet land produces brittle wood of little value for basket or furniture ware. Ordinary meadow or wheat land is suitable for a commercial osier plantation. The best situation is light loamy river bottoms which are overflowed once a year. The soil must, however, be drained either by tiles or by ridging the land before planting out the willows. The willow will not stand wet feet and yield salable rods. The cultivation is simple. Each spring before the shoots start, the soil between the rows must be loosened by means of a long narrow plow shovel, such as the "bull-tongue" of the cotton planter. One or two hoeings may be necessary to remove grass and weeds from between the stools. The bushes quickly overshadow the rows and keep down all weedy vegetation. It is absolutely necessary to keep a willow plantation free from weeds and grass. Fertilization is a matter of prime importance to the value of a willow crop. On overflowed lands usually there will be no need of further nitrogenous fertilizer, on uplands, however, this must be supplied. Nitrate of soda is the best form; acid phosphate is the best form of phosphoric acid, and kainit or muriate the best forms of potash. Potash is of

THE HIGHLANDS FARM OFFERS FOR SALE; Reg. Morgan Horses.

My Morgans won 19 premiums at St. Louis World's Fair, including Premier Championship for Exhibitor, winning largest amount in breeding classes.

Pure Scotch Shorthorns,
of best breeding; also excellent

Polled Durhams

50 head choice registered SOUTHDOWN BUCKS and EWES from Imported Prize Winners.

Duroc Jersey Hogs

L. L. DORSEY, Anchorage, Ky.
(near Louisville.)

SHORTHORN BULL



To avoid inbreeding, I will sell or trade for a bull of equal breeding, my royally bred herd bull, ROAN DUKE, 140106, sired by Imported Duke of Hamilton, 107383, bred by Wm. Duthie, of Aberdeshire, and out of Lavender of Hill Farm, 10th, bred by J. F. Prather, of Illinois. As his name indicates, he is a roan; calved January 29, 1898; is kind and gentle; not given to rambling; large and a magnificent breeder. For extended pedigree, etc., address WM. E. FEERY, Five Oaks, Tazewell county, Va.

ELLERSLIE FARM

Thoroughbred Horses

AND SHORTHORN CATTLE,

Pure Southdown Sheep and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,
CHARLOTTESVILLE, VA.



SPRINGWOOD SHORTHORNS

Young stock for sale, sired by ROYAL CHIEF. He by Imported Royal Stamp, Champion of Ohio 1894. POLAND CHINA pigs sired by Coler's Perfection. Write your wants. WM. T. FRASHER, Springwood, Va.

PURE-BRED

HEREFORD CATTLE

for sale, from 3 mos. to 8 years old, including 1 splendid 7 year old bull, thoroughly trained; 2 cows, 2 bulls, 2 years old; 1 bull 1 year old; 1 bull 3 mos. old; 1 heifer 2 years old and 1 3 mos. old. THE HATTON GRADE. Hatton, Va.

REGISTERED

Holstein Friesian Cattle and Berkshire Hogs

Any age. Address J. WALTER ROBERTSON, Whaleyville, Va.

REG. HOLSTEIN FRIESIAN

Bull Calv. 6 mos. old, for sale. Sire, De Kol 2d Butter Boy 3d No. 2, dam Argle Clothide 53367. Will make a fine bull.

J. H. FRASER,
Cartersville, Cumberland Co., Va.

BEST HOG ON EARTH

CHESTER WHITES at farmers' prices.
S. M. WISEGARDNER,
Rustburg, Va.



WOODSIDE BERKSHIRES

EVERYTHING SHIPPED ON APPROVAL

We are now offering some very choice pigs sired by my two great boars, LUSTRE'S CARLISLE OF BILTMORE, No. 72057, and MASTER LEE OF BILTMORE, No. 79379, and out of sows weighing from 500 to 600 lbs. each, in only fair breeding condition. To show our confidence in what we offer and insure satisfaction to our customers, we will ship pigs ON APPROVAL, and if not entirely satisfactory in every respect, you can return them at MY EXPENSE. In other words you can see the pigs before you buy. Address, WOODSIDE FARM, R. S. FARISH, Prop., Charlottesville, Va.

Elkton Stock Farm,

LOCATED ON NORFOLK & WESTERN R. R.

12 Miles W. of Lynchburg.

Breeders of Pure Bred, Registered

HEREFORD CATTLE

AND

BERKSHIRE HOGS.

Young stock for sale at all times, at reasonable prices.

All statements and representations guaranteed.

LONG DISTANCE TELEPHONE,

FOREST DEPOT, VIRGINIA.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.



JERSEY BULLS AND HEIFERS.

Near better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$35; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battletown, N. C.

THOROUGH-BRED...

Berkshire Boars, Dorset Buck Lambs, Jersey Bull Calves.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

Registered Jersey Bull

from high testing stock for sale. Very handsome and has many dairy points; dam tested 18 pounds butter in 7 days; grand dam tested 17½ pounds same time. EVERGREEN FARMS, W. B. GATES, Prop., Rice Depot, Va.

Echo Farm Poultry

No Eggs for hatching till Sept. 1st. Then I will have new blood by putting all new males in my flock. These males will come from some of the best flocks in America. No stock for sale. Will not sell any birds until we have 2,000 layers. Eggs during Sept., \$1 for 15; \$6 per 100.

CAL HUSSELMAN.

R. F. D. No. 6, Richmond, Va.

15 EGGS ONLY 75 C.

From choice pure-bred S. C. BUFF ORPINGTONS or R. C. WHITE LEGHORNS. Order direct from Ad. Satisfaction guaranteed. T. M. KING, Hagan, Va. R. F. D. No. 2.

special value in this crop, as it produces heavy solid wood. A good formula for upland willow plantations is as follows:

Nitrate of soda, 500 pounds; acid phosphate, 1,000 pounds; muriate of potash, 500 pounds. Mix and use from 1,000 to 2,000 pounds per acre. Apply in spring as soon as the ground has been cultivated.

The crop is gathered at any time between the fall of the leaf in autumn and the rise of sap in spring. The harvest does not conflict with any other farm crop. The shoots or rods are cut off by hand as close as possible. From the second to the twelfth year the plantation should yield on average of five to six tons of salable shoots. The present price in New York market is for unpeeled shoots \$17 per ton. First class peeled rods bring about 6 cents per pound. The cut shoots are stood in a shallow stratum of water about the time that the sap begins to rise in spring. The shoots absorb water, the buds start and the bark becomes loose and will peel off easily. The part of the bark, which was covered by water, will be found rotted and can be rubbed off between finger and thumb. The rod is then drawn, butt foremost, through a hole just large enough to admit the cleaned butt. The rod is pulled through the hole and leaves the bark behind. After peeling, the rods are dried in the sun and then baled for shipment. New York, Boston and Baltimore are the chief markets. The U. S. Department of Agriculture will supply small trial lots of osier cuttings free of charge.

GERALD MCCARTHY,
N. C. Dept. of Agriculture.

He was enjoying an ear of corn in the good old-fashioned way. "You look as if you were trying to play a flute," she remarked. "Oh, I don't know," he rejoined, "It's more like a corn'et."

SHROPSHIRE SHEEP.

An Administrator's Sale of a fine lot of Shropshire Sheep is advertised in this issue. These were bred by a well known breeder and farmer.

Rock Island Co., Ill., 6-26-'05.

Never change the make-up of the Southern Planter, the book form, the large type, make it at once all that could be desired, being easily filed and read. I may add it has been a great help to me.

WALTER M. ROBINSON.

LOUHOFF'S

White Wyandottes, White and Brown Leghorns, Barred Plymouth Rocks.

Young and old stock for sale.

PIEDMONT HEIGHTS FARM,
Yancey Mills, Va.

Bargain Sale

4,000 BREEDING BIRDS to offer. 40 VARIETIES BEST POULTRY. Large illustrated book, 6c. List free. Get prices, save money.

JOHN E. HEATWOLE,
Box L, Harrisonburg, Va.



EGGS FOR HATCHING.

\$1 for 15. Black Minorcas, Black Langshans, Barred and White Rocks, Light Brahmas, S. L. Wyandottes, S. C. W. Leghorns, S. and R. C. B. Leghorns. A few more S. L. Wyandotte cockerles for sale, \$1 each. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

SINGLE COMB BROWN LEGHORN

Eggs for sale; 15 for 75c., 30 for \$1.25. Send us your order and get a good stock of chickens. We give satisfaction. Prompt shipment.

Stock for sale after August. "The Manager of Meherri's Poultry Farm is well known to me, and is thoroughly reliable."—S. E. Coggin, Agt. So. Ex. Co. MEHERRI'S POULTRY FARM, Branchville, Va.

FINE REGISTERED

Duroc Jersey Pigs

Fall Delivery for sale. ORPINGTON and WHITE ROCK eggs from the best strains that money can buy. Pekin Ducks; also 10 Bee gums cheap. WALTER M. CARROLL, Box 106, Lynchburg, Va.

Brooklyn, N. Y., 6-22-'05.

I wish to say that after examining a number of the leading agricultural journals, the Southern Planter is in my estimation head and shoulders above them all. If every farmer in the State of Virginia were to take it and read it for five years, the agricultural wealth of the State would be doubled in that time.

H. P. HINMAN.

Halifax Co., Va., 7-10-'05.

I am lost without the Southern Planter. I could not farm if I did not have it. W. W. STOCKWELL.

THE LAZY MAN'S SILK WORM.

Editor Southern Planter:

The ordinary silk of commerce is the product of the mulberry silk worm. This worm is a domesticated, highly bred animal, which like the modern Jersey cow gives unequalled returns for proper care but which rapidly deteriorates under neglect.

There are several species of half-wild and therefore more hardy silk worms of which the best for the United States is the Ailanthus worm, *Philosmia Cynthia*. This worm feeds out of doors upon the growing tree, and once started to feeding it looks out for itself for the rest of its active life. It has the further advantage over the mulberry worm in that it is several brooded and will yield two or three successive crops of silk cocoons each summer.

The fabrics known in commerce as foulards, crepes, sorahs and wash silks generally are largely the product of Ailanthus silk. The silk is, also extensively employed in manufacture of carpets, plushes and mixed or fancy dress goods. The demand for the fiber is far in excess of the supply. The price paid for Ailanthus cocoons is about one-third less than that paid for mulberry cocoons, but the cost of producing Ailanthus silk is only about half that of producing mulberry silk. The production of Ailanthus silk is, however, not as well adapted for ladies, children and old people as is the production of mulberry silk. Ailanthus silk can be made a regular and profitable money crop on most American farms. It is a crop which can be raised with ordinary farm labor and upon soil unfitted for any other salable produce.

The Ailanthus or "Chinese tree of Heaven" is a well known and handsome shade tree, hardy wherever the Persian varieties of peach tree thrive. It is practically free from insects and fungus pests and when grown for shade becomes a stately tree of 80 feet or more. When grown for silk worm food the Ailanthus is planted closely and grown in shrub form. The best way to set the shrubs is about 12x6 feet. The Ailanthus will grow luxuriantly upon the poorest soil so long as it is not wet. Wet soil soon kills the tree.

In practical silk growing the Ailanthus grove should be located upon the poorest and driest spot of the farm. Though the tree will thrive under the utmost neglect it will pay the silk grower to take good care of the grove. The quality and sale price of the silk largely depends upon the nature and amount of plant food available for the trees.

The best way to keep an Ailanthus grove in good condition and to secure the greatest possible value in silk is by fertilizing the soil every fall with kainit or muriate of potash and acid phosphate or raw bone meal. Stable manure must be used in very small quantities if at all, as it tends to produce coarse and brittle silk. The fol-



HIGHLAND STOCK FARM,

Special attention given to the breeding of
POLLED SHORT-HORN CATTLE, SHROPSHIRE SHEEP, POLAND CHINA HOGS, ETC.

I have a nice lot of pigs ready for shipment, sired by MASTER SUNSHINE 2d, whose sire sold for \$1,000 at ten months old. Also, a few POLLED SHORT-HORN Heifers for sale. All my surplus Shropshires for this season have been sold. All stock kept recorded. For further information, write

HENRY S. BOWEN,

Witten's Mills, Tazewell Co., Va.

RED POLLS For Sale

One registered bull. Four Cows, served, 5 years old. Four yearling heifers: the cows and yearlings are high grades, from best English Stock, from $\frac{3}{4}$ to $\frac{1}{2}$ to pure-bred. Will sell at a low price.

Several yearling GUERNSEY BULLS, JERSEY HEIFERS and CALVES.

BERKSHIRE boars ready for service, Sows in pig and pigs, pairs and trios, not akin.

M. B. ROWE & CO., Fredericksburg, Va.

OAK HILL FARM

SADDLE and THOROUGHbred HORSES, ABERDEEN-ANGUS and JERSEY CATTLE, BERKSHIRE, POLAND-CHINA, DUCRO JERSEY and TAMWORTH HOGS. ❖ ❖

WHITE PLYMOUTH ROCKS, WHITE HOLLAND TURKEYS, PEKIN DUCKS and PEA FOWLS. Eggs in Season.

SATISFACTION GUARANTEED. WRITE FOR PRICES.

Shipping Point, Oak Hill, (station on farm) D. & W. Railway 15 miles West of Danville, Va.

SAM'L HAIRSTON, Wenona, Va.



Suffolk Sheep

Young REGISTERED EWES and a few BUCK LAMBS for sale, at reasonable prices.

I commenced 5 years ago with a few imported ewes and have never before offered any ewes.

I shipped a car of half-bred Suffolk Lambs to New York, June 3rd, averaging 90 lbs. and they topped the market. K. E. HARMAN, Pulaski, Va

EDGEWOOD STOCK FARM.

♥ ♥ DORSETS. ♥ ♥

Our Dorsets all sold again. We urged you to place orders early. Our Fall Lambs will start in October. Will book orders now. We thank our friends for their kind words—"Kind words are more than coronets." J. D. & H. B. ARBUCKLE, Maxwellton, Greenbrier Co., W. Va.

N. B.—We may be persuaded to sell five ewes in lamb.



When corresponding with our advertisers always mention SOUTHERN PLANTER.

MORVEN PARK.

The Property of WESTMORELAND DAVIS, Esq.

Dorset Horn Sheep.

Flock headed by MORVEN'S BEST 4132 (C. D. C.) who took a first prize at the English Royal in 1904.

A few imported Ram Lambs, (from the flock of W. R. FLOWER, Esq.) fine in size and fleece, for sale at moderate prices.

Large White Yorkshires.

Herd headed by Imported Boar, Holywell Huddersfield 4350 (A. Y. C.) 2nd prize winner at the Yorkshire Show in 1904.

All pigs either directly imported or bred at Morven Park from imported parents; imported boars from the herds of Sanders Spencer and Son, and other celebrated English Herds, for sale.

Reg. Guernsey Cattle.

Herd headed by imported TOP NOTCH 9023 (A. G. C. C.) assisted by MAIN-STAY'S GLENWOOD BOY 7607 (A. G. C. C.)

Bulls only, from deep milking dams, for sale. No cows or heifers for sale.

Flocks and herds may be viewed by appointment.

For further particulars, Address

**LIVE STOCK DEPARTMENT, MORVEN PARK,
LEESBURG, LOUDOUN CO., VA.**

lowing formulas can be recommended:

1. Muriate of potash, 1,000 pounds; raw bone meal, 1,000 pounds. Mix and use from 400 to 800 pounds per acre.

2. Kainit, 1,000 pounds; acid phosphate, 1,000 pounds. Mix and use from 600 to 1,800 pounds per acre.

Each fall sow the spaces between the rows with Crimson clover, or better sand vetch and turn under the growth the following spring. If sand vetch is used it will reseed itself from year to year and will, therefore, need but one sowing.

The Allanthus tree is easily propagated from seed, from cuttings of two year wood and from suckers. A grove planted 12x6 feet will require 605 trees. The trees are fit to support silk worms the next year after setting in grove. One man can attend to 10 acres of Allanthus grove with help of children during the cocoon harvests.

Counting upon only two crops each year the net profits should be about \$50 per acre.

The undersigned will send to any reader of this paper a Bulletin treating in detail of Allanthus silk worm. This Bulletin is free in North Carolina, but applicants from other States must enclose ten cents in postage stamps.

GERALD MCCARTHY,
Biologist N. C. Dept. Agriculture,
Raleigh, N. C.

BERKSHIRES AT THE GLENBURN FARM, ROANOKE, VA.

Whilst attending the Farmers' Convention at Roanoke we availed ourselves of the opportunity to visit Dr. J. D. Kirk's farm, Glenburn, near that city. We were greatly pleased with the herd of Berkshire hogs which the Doctor is building up there. He has a number of the finest imported hogs we have seen in this country, and also some of the best native bred ones. In giving his instructions to the gentleman who bought for him in England his orders were to buy the best to be had, and acting on this order winners at the Royal Show and others were secured and they are undoubtedly some of the best hogs ever imported into this country. The young pigs from these hogs and from others selected from the best herds in this country are finely developed, well marked animals and fit to head any herd. Buyers from Dr. Kirk can have the choice of imported or native blood or a cross of these and cannot fail to secure pigs of which they will be proud. We did not see a poor hog or pig on the farm. He has also a small herd of Jersey cows, many of them of choice breeding but kept strictly as a milk and butter producing herd.

Chesterfield Co., Va. 7-10-05.

I am trying to get your paper in every home in this community, as I think it is the best farm paper in existence and think its circulation in this neighborhood so far has worked great good.

W. S. IVEY.



ACTOR 26TH. 136288.

INGLESIDE HEREFORDS.

Owned by S. W. Anderson, Blaker Mills, Greenbrier county, W. Va.

A choice lot of BULLS, COWS and HEIFERS for sale. Also a few POLLED HEREFORD BULLS recorded in the National Polled Hereford Records. Write for catalogue and prices. Farm near Alderson, W. Va., on the C. & O. R. R. Telephone and Telephone Office, Alderson, W. Va.

Bacon Hall Farm.

Hereford Cattle -:- Berkshire Hogs

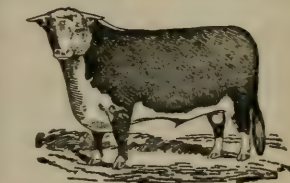
REGISTERED--ALL AGES.

DORSET RAMS.

Toulouse Geese, Muscovy Ducks.

MOTTO: Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.



Grand Champion Prince Rupert, No. 79639.

Registered Hereford Cattle and Berkshire Hogs.

EDWARD GAY BUTLER, Aasfield Farm, Berryville, Va.

Hereford Herd headed by Prince Rupert, No. 79639, whose son, Prince Rupert, 2d, was first prize in the 2-year-old class at the recent Chicago International show.

Berkshire Herd headed by Baron Premier, No. 5527, whose son "Admiral Schley" was first in the 6 to 12 months class at the International Show, 1902.

Young stock both calves and pigs for sale at reasonable prices.

CORRESPONDENCE INVITED.

HEREFORDS THAT ARE HEREFORDS

ACROBAT the greatest living Hereford sire, stands at the head of the most select collection of breeding cows in the South and East. Write for our Hereford History, Herd Catalogue, and large picture of ACROBAT. We have sold this month fine bull calves to Virginia and South Carolina, and one to Brazil, South America. Discriminating buyers get their breeding stock from Rosemont. There's a reason. We want to sell some nice bull calves to our Southern friends, and if they buy now, we are going to keep their purchases until fall for shipment. This is very liberal on our part, which we know will be appreciated by our friends south of the fever line. We also breed HACKNEY HORSES, BERKSHIRE HOGS and WHITE WYANDOTTE FOWLS. Let us hear from you. ROSEMONT FARM. We lead, others follow. Berryville, Clarke county, Va.



HEREFORDS (ENTIRE HERD) DORSETS (ENTIRE FLOCK)

A prompt buyer will get a bargain. H. ARMSTRONG, Lantz Mills, Va.

ANGORA GOATS.

We have just imported over 300 fine Angoras from New Mexico. We have Angoras from Oregon, Texas, California and New Mexico.

DIAMOND V RANCH, - - - - - Rock Castle, Va.

When corresponding with our advertisers always mention the SOUTHERN PLANTER.

MAGAZINES.

It is nearly a year since any American magazine has been fortunate enough to secure a story from Kipling; but the August Century prints a tale, "An Habitation Enforced," which gives us Kipling at his best. Someone, in comparing Kipling with the old, three-volume novelist, has said that he gives us "the Liebig extract of those cattle lowing on a thousand hills," so here, where two Americans, a nervously broken millionaire and his wife, take up an enforced habitation in an enchanted corner of England, he contrives to give a quintessence of American and British civilization—a commentary, in brief, with vistas such as only a Kipling can open up. A delightful vein of satire crops out wherever the British way and the American way meet, a vein which will charm readers on both sides the Atlantic. Most readers, too, will find in this latest story of the greatest of living English story-writers the spiritual touch which was so strongly manifest in "They," seemingly marking a new and higher phase of development in man and writer.

Especially timely articles in the August Century are "The Spirit of School and College Sport—American and English Rowing," by Ralph D. Paine; "Alpine Climbing in Automobiles," by Sterling Heilig; and "The American Circus," by E. S. Hallock. Mr. Paine writes with the authority of personal interest and experience—for he rowed on the Yale crew in his college days and has been an accredited chronicler of events at Henley. Mr. Heilig has been over seven of the eleven circuits of the Cup of the French Alps in a sixteen horse-power four-cylinder automobile and his article deals with his experiences—"I find myself still doubly astonished—astonished to get back alive and astonished at the ease and security with which the exploit was accomplished." The history of the circus is really an important chapter in the records of our American life; and E. S. Hallock's account is enlivened by numerous pictures by A. B. Frost.

It would be hard to tell, watching St. Nicholas month after month, what is the best of that favorite of children's periodicals: whether the body of the magazine, with its stories, pictures and rhymes; or the departments, the St. Nicholas League training for larger endeavor and rewards, Books and Reading chat about all sorts of bookish interests, Nature and Science, keeping young readers in close touch with the bird, insect and animal life around them; the Letter-box, the Riddle-box, the Stamp Page. Each feature keeps up so high a standard of live interest that it is safe to say most young readers, and many older ones, read the magazine through every month from cover to cover.

Quite appropriately for an August issue, the leading story of the August St. Nicholas is a tale of yachting, "The Commodore's Cup," by William B. McCormick. There are plenty of

LARGE YORKSHIRES.

The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times.

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

Address **BOWMONT FARMS, Salem, Va.**

The Grove Stock Farm

... HAS FOR SALE ...

Holstein-Friesian Calves

of fine breeding and individuality
at remarkably reasonable prices.
Do you want something choice?

N. & W. and Southern Railways.

T. O. SANDY, Burkeville, Va.

Sunny Home Angus.

A dozen of the grandest bull calves I ever bred, two of them—A Queen Mother and a Nosegay—good enough to head select pure-bred herds.

The line of sires from which the sire of these bulls sprung is conceded to be the greatest of the breed on this side of the water.

Such bulls as GAY BLACKBIRD, HEATHER LAD 2nd, BLACK KNIGHT, KNIGHT OF ST. PATRICK, KNIGHT OF THE LEGION are known wherever Angus Cattle are known. Come and select one of these herd headers they are bred right and built right.

A. L. FRENCH, R. F. D. 2, Byrdville, Va.

Farm at Fitzgerald, N. C., D. & W. Ry.

GLEN ALLEN STOCK FARM, Breeder of Aberdeen Angus Cattle.



"The Bulls that have Made Glen Allen Famous."

Herd headed by ALLENHURST KING 4, No. 47199, son of McHenry Blackbird 20th, 32499, assisted by POLLY'S ITO, 73790, son of Prince Ito, 50006, the famous \$9,100 bull.

Young Bulls for sale at reasonable prices, fit to head the best of herds, regardless of price or breeding.

**W. P. ALLEN, Proprietor,
R. F. D. No. 1, Ewing, Va.**

HERE IS A SPECIAL SALE

KING DARE REGISTERED SADDLE STALLION, 4 years old, 16 hands high, weighs 1,100 pounds; a show horse and a great breeder. Eight REGISTERED ABERDEEN ANGUS cows, yearling heifers, bulls and calves, by the great show bull, Beau Blackbird.

POLAND CHINA PIGS, FOX HOUNDS, FOX TERRIERS, SCOTCH COLLIES and BEAGLE HOUNDS. S. C. B. LEGHORN eggs, 30 \$1.00; \$3.25 per 100. J. D. STODGHILL, Shelbyville, Ky.

other good stories for both girls and boys: "How Pinkey Settled an Old Score," "The Quest of a Nile-green Collar," "Edgar's 'Sissy' Job That Paid," "Stories Told by Indians," from the late Julian Ralph; "The Hole in the Cannabed," another of Isabel Gordon Curtis' "Chuckie Wuckie" stories, and, of course, more chapters of "Queen Xixi of IX," attractively illustrated in color.

The Review of Reviews has an interesting table of contents for the August issue from which we take the following selections as illustrating the wide scope of the matter dealt with: The Progress of the World.

Record of Current Events. With portraits and other illustrations.

Some Cartoons of the Month.

John Hay: An American Gentleman. By Walter Wellman. With portrait.

Mr. Hay's Work in Diplomacy. By John Bassett Moore.

Canada's Canal System. By M. M. Wilner. With maps and other illustrations.

Electric Traction on German Rivers and Canals. With illustrations.

What the People Read in Holland, Belgium and Switzerland. With portraits and other illustrations.

The Solar Observatory on Mount Wilson. By Paul P. Foster. With illustrations.

The Coming Eclipse of the Sun. By P. T. McGrath. With map.

Progress of the Russian Revolution. By E. J. Dillon.

Hungary's Side in the Crisis with Austria. By Count Albert Apponyi.

Our Tariff Differences with Germany. By Wolf von Schierbrand.

The Japanese Merchant Fleet. By Winthrop L. Marvin. With illustration.

The Peace Negotiators at Washington. With portraits of Baron Komura, Baron Rosen and Mr. Takahira.

Leading Articles of the Month. With portraits and other illustrations.

Briefer Notes on Topics in the Periodicals.

The New Books. With portraits of authors.

T. W. Wood & Sons, Seedsmen, Richmond, Va., announce that they have added to their business a department for the inoculation of the seeds of all the leguminous crops with the specific bacteria of each particular crop and that they are now prepared to supply inoculated seed of all these crops ready for planting. Send to T. W. Wood & Sons for a copy of their circular on this subject.

Mobile Co., Ala., 6-25-'05.

I secured a copy of the Southern Planter from a friend of mine and consider it the best farm paper I have ever read.

J. A. DUMAS.

Bedford Co., Va., 6-6-'05.

Can't do without the Southern Planter. I think one copy is worth the subscription price for a year.

DR. T. C. DENNIS.

Baron Premier 3rd 75021,



the head of our herd, was first in his class at World's Fair; weighs 300 pounds at 22 months. His dam is litter-mate to Lord Premier, 50061, selling recently for \$1,500; his sire was premier champion winner at World's Fair at St. Louis. With this great hog and a large line of both imported and American well selected sows and gilts, especially chosen to mate with him, we are actually producing and accomplishing the pleasure of breeding the most magnificent strains of BIG, LONG, WIDE, DEEP, THICK-SET BERKSHIRE HOGS on short legs.

We are now offering a few bred sows and gilts and some three months pigs. It makes no difference how fine hogs you desire to purchase, you

need not go farther than

MAPLE SHADE FARM,

W. H. COFFMAN, Propr. Bluefield, W. Va.

BERKSHIRES FOR SALE

One litter, 12 pigs out of IMPORTED RUDDINGTON DINAH 68324, a superb sow.

One litter 10 pigs out of Lady Longfellow of Forest Home 72587. An unusually prolific sow whose pigs always grow marvelously.

One show sow pig; One show gilt, bred.

A few Boars and some Boar Pigs.

FOREST HOME FARM, Purcellville, Va.

NOW IS YOUR TIME FOR

BARGAINS

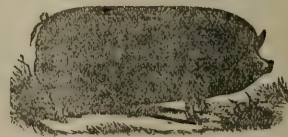


Sixteen service boars, 13 open gilts, four bred gilts, two bred sows and pigs galore. Pigs coming and going almost every day in year. If any of larger size wanted have them booked at once as early September will take them all. Most of these from imported blood on both sides, balance imported on one side.

THOS. S. WHITE,
Passifern Stock and Poultry Farm,
Lexington, Va.

Large English Berkshires

ROYALLY BRED PIGS for sale. April farrow. Some young boars ready for service. BILTMORE BLOOD. PRICES REASONABLE. C. S. TOWNLEY, Red Hill, Va.



We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,
Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

ALFALFA

The Most Useful and Profitable Crop you can grow. The best time to sow (in the South) is from August 15th to September 15th.

Prepare your Ground carefully and to insure a stand use

ALFALFA BACTERIA INFECTED SOIL

as recommended by the Agricultural Experiment Stations.

You can obtain enough of this infected soil to inoculate ONE ACRE OF GROUND FOR \$1.00 per bag (about 2 bushels) F. O. B. EWELL FARM.

Send in your orders now and shipment will be made when you are ready. Address

EWELL FARM, Spring Hill, Maury Co., Tenn.

HOW DOES IT SEEM TO YOU?

It seems to me I'd like to go
Where bells don't ring nor whistles
blow,
Nor clocks don't strike nor gongs don't
sound,
And I'd have stillness all around—

Not real still stillness, but just the
trees
Low whisperings or the hum of bees,
Or brooks' faint babbling over stones
In strangely, softly tangled tones.

Or maybe a cricket or katydid,
Or the songs of birds in the hedges
hid,
Or just some sweet sounds as these
To fill a tired heart with ease.

If 'tweren't for sight and sound and
smell
I'd like a city pretty well;
But when it comes to getting rest,
I like the country lots the best.

Sometimes it seems to me I must
Just quit the city's din and dust,
And get out where the sky is blue—
And, say, how does it seem to you?
—Eugene Field.

We acknowledge with thanks a copy
of the report of the proceedings of the
12th National Irrigation Congress held
at El Paso, Texas, November 15-18,
1904.

We also acknowledge receipt of the
Year Book of the American Devon Cattle
Club for 1905 with thanks.

Philadelphia, Pa., 7-3-05.

I thoroughly enjoy reading your interesting and instructive journal and plan my small place on your suggestions.
J. M. OKIE.

Spotsylvania Co., Va., 6-1-05.

The Southern Planter has been in my
every farm house, as it is in my judgment
the best farm paper in the country.
WM. C. ORRICK.

Loudoun Co., Va., 6-21-05.

Your valuable Planter is easily
worth three times the money to any
farmer who values good sound doctrine.
JNO. L. MORRIS.

— WE SUPPLY —

ALFALFA BACTERIA in the shape of INFECTED SOIL

from an old two acre Alfalfa plot which has given us 3 or 4 good cuttings yearly for the past six years, and is still doing well. Price, \$1.00 per bag (in 4 bag lots) of about 100 lbs.; more than 4 bags, 75 cents each; f. o. b. Midlothian; soil sifted and ready for use either by hand or drill.

J. B. WATKINS & BRO., Hallsboro, Va.

A BOON TO THE FARMERS OF SOUTHSIDE VIRGINIA.

Having Purchased at the long price of \$3,000, the splendid

GERMAN COACH STALLION FRANK 2929,

We offer his services to the lovers of fine horses on the following reasonable terms: \$10 single, \$15 the season, \$20 insurance, of which \$2.50 cash, balance when mare is known to be with foal; usual return privilege on failure. Groom's fee, 50c.

Mares kept on pasture at \$3.50; on grain at \$7.50, at owner's risk of fire, etc.

Frank is one of the handsomest horses in Virginia, a beautiful bay with black points, stands 17 hands, weighs 1,350; has as much action and activity as a Hackney. The opportunity to raise some very fine horses is now offered to the people of this section. We should be able to offer horse buyers as good stock as can be found in other parts of the State.

GERMAN COACH HORSE BREEDERS ASSOCIATION, Farmville, Va.

W. W. JACKSON, President.

H. E. BARROW, Treasurer.

W. G. DUNNINGTON, Vice-President.

J. L. HART, Secretary.

POLAND CHINA AND Tamworth Pigs

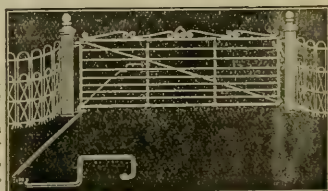
entitled to registration; also bred sows at reasonable prices.

APPLY TO J. C. GRAVES, Barboursville, Orange Co., Va.

MANLOVE SELF-OPENING GATE

ALWAYS IN ORDER.

In general use many years. Is guaranteed to work and give satisfaction, all sales made on that basis. It saves time and annoyance. Adds to value, and good appearance of a home and is a good advertisement for any up-to-date prosperous place. Catalogue, MANLOVE GATE CO., 272 Huron street, Chicago, Ill.



BILTMORE FARMS

THE CHOICE SELECTION OF IMPORTED AND HOME BRED JERSEYS to be sold at **Public Auction on the Farms August 22nd**, comprises the first choice of our young stock. They are young daughters of the best Jersey bulls and cows in the world.

Some of the Sires and Dams are as follows:

SIRES

The Champion—Golden Lad's Successor.
Kola's Golden Lad.
Blue Belle's Flying Fox.
Trevarth.
Actor of Biltmore.
Oxford Duke.
Golden Jolly.
Golden Fern's Lad.
Eminent 2nd.

DAMS

Golden Beatrice; 89 lbs. 5 ozs. butter in 30 days.
Gay Nun; 11,110 lbs. milk testing 650 lbs. butter in a year.
Uncle Peter's Golden Del 9,500 lbs. milk testing 684 lbs. butter in a year, 20 lbs. butter in a week.
Harrowgate of Biltmore; 9,000 lbs. milk in a year.
Mabella of Biltmore; 10,068 lbs. milk inside a year.
Kate of Biltmore; 11,000 lbs. milk in a year.
Golden Ora. Golden Rosebay.

We are not going to show, and many of these will be just right in quality and age to show in any company.

They are hardy, thoroughly acclimated cattle, of rare conformation and breeding, and we believe this to be the best lot of young Jerseys that has ever gone on the market.

Tourist tickets of one and a third fares for the round trip, and special hotel rates by the day or week at Kenilworth, Inn., and other leading hotels.

WRITE FOR ILLUSTRATED CATALOGUE.

Apply to GEO. F. WESTON, Gen. Mgr.
BILTMORE FARMS,
Biltmore, N. C.

Biltmore Berkshires:

AUCTION SALE, August 23rd, 1905.

On the BILTMORE FARMS, Biltmore, N. C.

Consisting of young sows ready to breed or safe in pig (bred just right to produce next year winners in under the year class) and a few grand, selected boars ready to show or breed.

We do not show and have therefore included all our best show animals.

As usual we are including our best in this very choice selection, and this means several items of vital importance and interest to all breeders:

(1) THEY ARE FROM ABSOLUTELY HEALTHY HERDS. You do not run the risk of getting cholera and lose your entire herd from one freshly introduced animal.

(2) THEY ARE SELECTED AND DESCRIBED BY AN EXPERT. This is worth a whole lot to every buyer. We have excluded all animals with any material defects. They are the most desirable animals to breed from, and you get the benefit of our ten years' experience.

(3) THEY ARE FROM TESTED STRAINS THAT WE HAVE BRED AND IMPORTED FOR MANY GENERATIONS. You can depend upon their reproducing their good qualities, as they are not sports, but are backed up by many generations of champions and good breeders.

(4) They are raised under such natural and favorable conditions that you can, with reasonable care, depend upon their continuing to do well after they leave our hands. They are skim milk, grass, clover and alfalfa raised pigs, with big runs, and with so much exercise they make good, heavy breeders.

FROM THOUSANDS OF GRATIFIED CUSTOMERS WE CAN ONLY REFER TO A FEW OF THE MOST RECENT.

NORTH CAROLINA.

BILTMORE FARMS, Biltmore, N. C.:

Chapel Hill, N. C., July 3, 1905.

Dear Sirs,—Replying to your enquiry, I am pleased to say that I have bought Berkshires of you five times. They pay me better than anything I own. With best wishes, I am, Yours very truly,

H. H. WILLIAMS, Prop.

TEXAS.

GEO. F. WESTON, General Manager, Biltmore Farms, Biltmore, N. C.:

San Marcos, Texas, July 7, 1905.

Dear Mr. Weston,—I am in receipt of your letter, No. 81, of July 1st to-day, having been away in New York for two weeks. I am very pleased to say that Leclerc of Biltmore has developed into a remarkably fine animal, and his pigs are among the very best on my place, and I feel that this is saying quite a good deal in his praise, as you doubtless know that I have some very valuable boars in my herd, all winners at several State fairs, as well as sixth at World's Fair at St. Louis.

I wish also to add that I highly appreciate the efforts the Biltmore Farms have made in behalf of the farmers of the United States—going abroad and buying the best animals to be had and importing them into this country, thereby enabling those of lesser means to secure at a reasonable price such blood as could not otherwise be obtained.

Yours very truly,

WILLIAM GREEN.

VIRGINIA.

BILTMORE FARMS, Biltmore, N. C.:

Roanoke, Va., July 7, 1905.

Gentlemen,—In answer to your favor of the 6th, I beg to state that my business transactions with you have been eminently satisfactory. All of the hogs that I have purchased of you at various times have done well and proven profitable. The first litters of the two sows that I bought at your 1904 auction sale paid the first cost of the sows, and the imported boar I bought from you a little later has developed into an animal the equal of the best in the land. I was so much pleased with my purchases that I tried to buy from you two more imported sows, but you could not supply me, so I tried importing myself, and now claim to have as good Berkshires as can be found.

Yours very truly,

DR. J. D. KIRK.

WEST VIRGINIA.

BILTMORE FARMS, Biltmore, N. C.:

Williamstown, W. Va., July 12, 1905.

Dear Sirs,—In reply to your favor of the 6th instant, it affords us pleasure to say that in our business transactions with Biltmore Farms, running through the last eight or ten years, we have found your descriptions of stock correct and conservative; the stock ALWAYS GOOD, ranking in the first class, and sometimes VERY SUPERIOR. Our last purchase, "Mr. Dooley of Biltmore," by Loyal Lee II of Biltmore, is an exceptionally fine hog, and we have but one trouble with him, and that is to keep him from getting too fat without starving him beyond the approval of our consciences.

We know of no persons handling a higher class of Berkshires than yours, and we could neither ask nor expect more satisfactory treatment than we have received from you, and we do not hesitate to commend you to the purchasing public, and with the earnest wish that your endeavors to improve the already high quality of the Berkshire, which we consider the best breed to date, may prove eminently successful, we are,

Very truly yours,

HENDERSON BROTHERS.

NEW YORK.

BILTMORE FARMS, Biltmore, N. C.:

Penn Yan, N. Y., July 15, 1905.

Dear Sirs,—The Berkshires purchased of the Biltmore Farms have grown very satisfactorily. They have been fully up to the descriptions given of them.

Yours truly,

CALVIN J. HUSON, Kalamora Farm.

VERMONT.

GEO. F. WESTON, General Manager, Biltmore Farms, Biltmore, N. C.:

Woodstock, Vt., July 11, 1905.

Dear Sir,—The two Berkshires, Danesfield Roger and Danesfield Mab, purchased at your sale of 1904, have turned out splendidly. The boar, Danesfield Roger, has developed into a magnificent animal, and is getting some of the best pigs ever seen in this section.

If it is possible for me to get away I shall attend your next sale. I hope that your business may call you East, and that I may have the pleasure of meeting you in Woodstock.

Very truly yours,

BILLINGS FARMS, George Aitken, Manager.

NEBRASKA.

BILTMORE FARMS, Biltmore, N. C., Geo. F. Weston, Manager:

Lincoln, Neb., July 15, 1905.

My dear Sir,—The imported Berkshire boar, Danesfield Mating, purchased of you, has proved a source of revenue for me, far more than I expected. His sons and daughters are in good demand, and can go with the four hundred of the Premier and Masterpiece families.

Your minute and honest statements of the true condition of all your Berkshires and Jerseys, convinces the purchasers of your fair dealings, and guarantee to them that they will get what they intended to buy.

Sincerely yours,

J. K. HONEYWELL.

SOUTH CAROLINA.

BILTMORE FARMS, Biltmore, N. C.:

Pendleton, S. C., July 20, 1905.

Dear Sir,—I had the pleasure of attending your first annual sale and made purchases, and have attended every other one and bought every time. I have no reason to regret my purchases, as they have proved to be satisfactory breeders, and have made money out of them. Wishing you much success, I am,

Yours truly,

B. HARRIS, Woodburn Stock Farm.

THE SOCIETY FOR ITALIAN IMMIGRANTS.

Editor Southern Planter:

Dear Sir: The need of the Southern States for laborers, mill workers and settlers is leading to many inquiries why out of the large number of immigrants coming from Europe more cannot be diverted Southward than at present go. They can be; but only when the conditions under which they come are studied and understood, and the requirements for their Southern settlement met with.

A primary requisite is that they should be familiarized with the conditions of the Southern States and the advantages they offer. Landing as they do chiefly in Northern ports it is absurd to suppose they will travel farther if they know nothing about the country they are going to. Some immigrants can be informed of the advantages of the Southern settlement after they land here, but to be really effective such instruction must be given to them before they sail.

Accordingly, The Society for Italian Immigrants will be glad to receive printed matter relating to the advantages of settlement in the South and will distribute such printed matter both in this country and in Europe where it will do most good in inducing emigrants to this country to settle in the Southern States. It will make no charge for doing so except actual expenses of distribution which will be nominal.

The Society will also cause any manufacturing plant, mine or plantation, the owners of which desire workmen or settlers, to be examined by a competent person who will report fully thereon. These reports will cover all the conditions which concern the prospective settler, such as climate, house rent, cost of living, rate of wages, hours of work, etc. They can, if desired, be printed and distributed to likely settlers. The cost of such a report will vary and must be borne by the owner.

As the Society is an entirely charitable Society, all it will do will be done simply for the cause of benefitting the immigrant by inducing him to settle where he will live most healthily and happily. And accordingly it will do any other thing besides those pointed out in this letter which will serve this object.

Yours respectfully,
ELIOT MORTON,
President.

Charles Spurgeon was driving straight to the truth when he said that some temptations come to the industrious, but that all temptations come to the idle. Another way of saying that an idle brain is the devil's workshop, a workshop being the place where all kinds of tools are kept and all kinds of work are carried on.



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NATIONAL RECIPROCITY CONFERENCE.

The establishment of fairer trade relations with foreign nations is a matter that affects directly the prosperity of every farmer, stock grower and exporter in the United States. One by one the European Governments are tightening the coils intended to strangle the American export trade in agricultural products and manufactured goods. We are to-day face to face with a new and prohibitive German tariff designed to keep out every pound of American breadstuffs and provisions. Retaliation has been tried at tremendous cost to our producers and manufacturers, and is a failure.

Standing on the broad platform enunciated by President McKinley in his last speech at Buffalo, the undersigned representative organizations hereby call for a general conference upon this subject to be held at Chicago, Ill., August 15th and 16th, 1905, to urge the wisdom of substituting in our foreign relations the principle of reciprocity for that of exclusion and retaliation. We care not whether the future of our foreign trade be safeguarded by means of direct reciprocity treaties or under the provisions of a fairly drawn maximum and minimum tariff law under the terms of which the Government could directly negotiate advantageous international agreements; but the situation demands the establishment at once in some form of the underlying principle of conceding something to such nations as will concede valuable trading rights to ourselves.

You are, therefore, cordially invited to send such number of delegates to said conference as you deem necessary in order to properly present your views upon this great commercial problem—possibly the most important single issue before the American people at the present time. The time has come when the matter of obtaining broader markets for the surplus products of our farms and factories and of guaranteeing the markets that we already enjoy, must receive serious consideration.

Kindly advise Alvin H. Sanders, Chairman of the Committee on Arrangements, ninth floor Great Northern Building, Chicago, at earliest possible convenience as to the names of your delegates so that the roll may be made up at earliest convenient date and a hall commensurate with the probable size of the meeting engaged. The time is short. Hence prompt action is urged.

It is expected that the railways will grant reduced rates, which will be duly advertised.

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American Stock Growers' Association,
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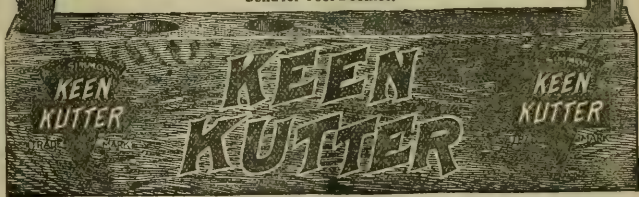
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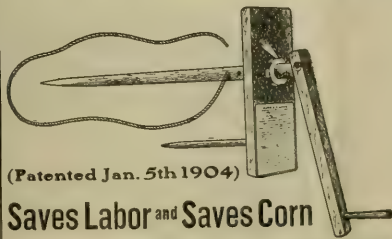
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We are heartily in sympathy with this movement and commend it to the support of our readers.—Ed. Southern Planter.

REPORTS.

U. S. Department of Agriculture, Washington, D. C. Year Book of the Department of Agriculture. This is a most interesting volume containing not only full statistical information on all agricultural products but a number of valuable articles on subjects of interest to all farmers. Write your Senator or Congressman for a copy.

Bureau of Animal Industry. Circular 80. Officials, Associations and Educational institutions connected with the dairy interests of the U. S. for the year 1905.

Bureau of Entomology. Bulletin 51. The Mexican Cotton Boll Weevil.

Bureau of Forestry. Bulletin 58. The Red Gum.

Bureau of Forestry. Bulletin 59. The Maple Sugar Industry.

Bureau of Soils. Circular 15. Manual Requirements of the Leonardtown Loam Soil of St. Mary County, Md.

Farmers' Bulletin No. 226. The Relation of Coyotes to Stock Raising in the West.

Cornell University Experiment Station, Ithaca, N. Y. Bulletin 226. An Apple Orchard Survey of Wayne County, N. Y.

Illinois Experiment Station, Urbana, Ill. Bulletin 102. The Construction of Silos.

Maryland Experiment Station, College Park, Md. Bulletin 100. The Wild Legumes of Maryland.

Bulletin 101. Common Injurious and Beneficial Insects of Maryland.

Bulletin 102. Leucocytes in Milk and Their Significance.

Bulletin 103. Method of Tobacco Seed Selection.

Maryland Agricultural Quarterly. Analysis of Commercial Feeding Stuffs Sold in Maryland.

Michigan Experiment Station, Agricultural College, Mich. Bulletin 224. Observations on the Influence of Nodules on the Roots Upon the Composition of Soy Beans and Cow Peas.

New York Experiment Station, Geneva, N. Y. Bulletin 267. Poisoning the Potato Beetle.

Ohio Experiment Station, Wooster, O. Bulletin 151. Proceedings of the



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Bulletin 104. A Wasting Disease of Young Cattle.

Tennessee Experiment Station, Knoxville, Tenn. Vol. XVIII, No. 1. Texas Fever Cattle Tick. Pasture Method of Eradication.

Virginia Weather Service, Richmond, Va. Report for June, 1905.

Wisconsin Experiment Station, Madison, Wis. Bulletin 125. Silo Construction.

Bulletin 126. Two Ways of Treating Tuberculosis in Herds.

Wyoming Experiment Station, Laramie, Wyo. Bulletin 65. Wyoming Forage Plants and Their Chemical Composition.

IMPORTANT NOTICE.

American Pomological Society meeting postponed from August 8-10 to September 19-21, 1905. Will meet at Coates House, Kansas City, Mo.

In deference to many requests and suggestions, coupled with the difficulty of securing the speakers desired for an August meeting, the convention has been postponed till September 19-21, 1905. It will occur, therefore, at the Coates Hotel, Kansas City, the place first announced, and under the same auspices. This change assures a good attendance, a good fruit exhibit, a cool pleasant temperature, and an excellent program.

All arrangements as first announced (consult circular) will be carried out. Come with your wives and daughters, prepared for an instructive and entertaining meeting.

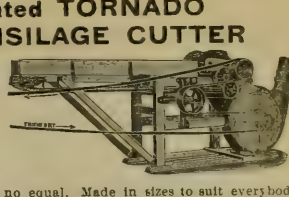

JOHN CRAIG, Secretary.
Ithaca, N. Y., July 18, 1905.

God keeps a costly school. Many of its lessons are spelled out through tears. Old Richard Baxter said, "O God, I thank thee for a bodily discipline of eight and fifty years," and he is not the only man who has turned a trouble into a triumph. This school of our Heavenly Father will soon close for us; the term time is shortening every day. Let us not shirk a hard lesson or wince under any rod of chastisement. The richer will be the crown, and the sweeter will be heaven, if we endure cheerfully to the end and graduate into glory.—Theodore L. Cuyler, D. D.

Durham, N. C., 6-12-05.

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SOUTHERN POETS.

Article VII.

Mary Washington.

James Barron Hope was born on the 23d of March, 1829, at the residence of his grandfather, Commodore James Barron, the younger, who then commanded the Gosport Navy Yard. His mother was Jane Barron, eldest daughter of the Commodore, a woman of quick and lively sympathies who wielded a clever, ready pen, and altogether was a personage of marked character. Her son and herself were closely knit together in mutual affection, and kindred tastes and aspirations. His father was Wilton Hope, a handsome and talented man whose estate bordered on the waters of Hampton River.

James Barron Hope gained his early education at Germantown, Pa., and at the Academy of Hampton, Va. In 1847, he graduated from William and Mary College. He began his career as secretary to his uncle, Capt. Samuel Barron, on board the man-of-war, "The Pennsylvania." He was afterwards transferred to the "Cyone" and in 1852, he made a cruise to the West Indies. His ancestors and relatives on his mother's side showed a strong bent towards the navy. His great-grandfather, James Barron the elder, organized the Virginia Colonial Navy, of which he was Commander-in-Chief during the Revolutionary War.

In 1856, Hope was elected Commonwealth's Attorney to the town of Hampton, which claimed him as her bard, his poems in the Southern Literary Messenger and other Southern periodicals (under the name of "Henry Ellen") having already attracted favorable notice. In 1857, Lippincott brought out "Leoni di Monota" and other poems by Hope, which were favorably received by the Southern critics. Amongst the minor poems, one attracted especial attention, "The Charge at Balaklava." This poem was so much admired by G. P. R. James, then British Consul at Richmond, Va., that he sent a copy of it to Queen Victoria, who acknowledged it graciously. It was republished in England and very favorably noticed by the press, though Tennyson had already treated of the same subject. Hope's poem, however, does not suffer at all by comparison, with that of the poet laureate.

On the 13th of May, 1857, Hope stood poet at the 250th anniversary of the English settlement of Jamestown. Indeed he was so often called on to act on great memorial occasions that he gained the title of "the poet laureate of Virginia." In the same year (1857) the poet married Miss Annie Whiting, of Hampton, a union that proved eminently happy, his wife, in addition to loveable feminine qualities, possessing a sound judgment in literary matters that was often of great service to her husband.

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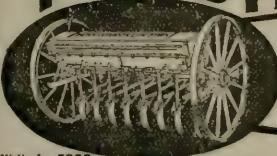
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Increase the Value of Your Crop 40%.



There are thousands of farmers in the United States, who in the last few years have doubled the profit they used to make on their corn crop, by harvesting the whole plant, stalks, leaves and all. Yet there are tens of thousands of other farmers who still snap or husk their corn in the field, letting the valuable stalks and blades go to waste.

We know that farmers, of all men, must base their operations upon the most strict business principles if they are to succeed; then why are so many of them following this practice of gathering only one-half of their corn crop?

Our Government Experiment Stations tell us that the ears represent only 60 per cent. of the feeding value of the crop, and that the other 40 per cent. is in the plant. And they have demonstrated further that the plant loses this value if it is allowed to stand in the field at the mercy of the weather.

Let us suppose you have 75 acres of corn and are going to husk it in the field; do you realize that your neighbor who has only 50 acres of corn, and who will harvest the whole crop, stalks and all, will make just as much profit on his crop as you will on yours? You have paid taxes or rent on 25 more acres than he has, you have plowed, planted and cultivated 25 more acres, and yet your net profit will be about the same. Can you afford to do business on that basis?

Here is the way it figures out. Suppose you both get sixty bushels of corn to the acre; your seventy-five acres at 50 cents a bushel will bring you \$2,250.00. His fifty acres of corn at 50 cents a bushel will

bring him \$1,500.00, and his fifty acres of stover would bring him \$800.00 more, \$2,300.00 in all—\$50.00 more from fifty acres than you get from seventy-five acres.

These are not random figures; they are based on the statements and experience of some of the highest authorities in the country. For instance, an acre in corn will yield two tons of stover, and these authorities place the value of shredded stover at \$8.00 a ton, producing \$16.00 extra profit on each acre. You might just as well have this extra profit as not by cutting your corn at the right time, just when the ears begin to glaze.

You cannot expect to get this stover profit if you leave it in the field and turn the cattle on it. By the time the cattle get to it, it is practically valueless.

Neither can you realize good results cutting it by hand. In the first place, the plant must be cut promptly, just when it is ripe, and by the time the field could be cut by hand much of the feeding value would be gone. Besides this, farm labor is so high that this method would reduce the profit too much.

Use a corn binder. It cuts the stalks and binds them into well-shaped bundles, which are easily shocked or stacked for curing.

With this machine the field may be harvested rapidly, just in the nick of time, when the ear and plant are at their best.

The experience of the best dairymen and feeders of the country demonstrates that the corn binder is very nearly indispensable to the man who has a silo and regularly fills it with corn.

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statue in Richmond, February 22d, 1858, Hope was the colleague of John R. Thompson and Henry A. Wise, reciting a fine memorial ode of his own composition, after the ode and address of the two above named had been delivered.

When the war broke out Hope took up arms for the Southern cause, and bore his part bravely throughout the conflict. After the war, he became editor of a daily paper in Norfolk, but the tread-mill of this life did not quench the poetic flame in him.

In 1881, Congress chose him as poet for the Yorktown Centennial, and as the press declared at the time, "his brilliant and masterly poem was a fitting companion piece to the splendid oration delivered on that occasion by the renowned orator, Robert C. Winthrop." This metrical address, "Arms and the Man," was published next year with various sonnets.

It would be tedious to enumerate all the various occasions on which his mother State called on him to act as her poet. Her last call was for him to provide a memorial ode for the laying of the corner-stone of the monument erected in Richmond to Robert E. Lee. The corner-stone was laid in October, 1887, but the poet died on September 15th. His poem, however, save for a few softening touches, was completed the day before his death, and was recited at the appointed time and place by Capt. W. Gordon McCabe, fit proxy for the departed poet, being himself a poet, and having been a devoted follower of the lost cause.

In analyzing the charm of Hope's poetry, one striking element seems to be its clearness and directness. He does not deal in subtleties or abstractions, but in a few strong and admirably chosen words, presents us with living and concrete pictures. His poems show the influence of war-like times, both in their spirit and their choice of topics, and to my thinking, no poems called forth by the great conflict, are finer than his. His style is characterized by a nervous vigor, brevity and directness peculiarly suited to war-like themes. "Our Heroic Dead" is an especially fine poem. I subjoin the opening stanza, regretting I have not space for more.

OUR HEROIC DEAD.

A King once said of a Prince struck down,

"Taller he seems in death."
And this speech holds truth, for now
as then,

'Tis after death that we measure men.
And as mists of the past are rolled
away

Our heroes who died in their tattered
gray,

Grow "taller" and greater in all their
parts,

Till they fill our minds, as they fill
our hearts,

And for those who lament them,
there's this relief,

That glory sits by the side of Grief.
Yes, they grow "taller," as the years
pass by,

RUBEROID ROOFING



STANDARD FOR 14 YEARS.

The oldest prepared roofing on the market, and the first Ruberoid Roofs laid, many years ago, are still giving satisfactory service under the severest climatic and atmospheric conditions.

Contains no tar or paper; will not melt, rot or tear. Acid fumes will not injure it.

Outlasts metal or shingles. Any handy man can apply it.

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Between All Points
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W. P. Taylor, Traffic Manager

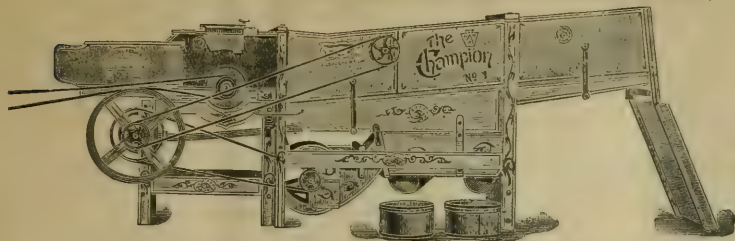
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**Grain and
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NOS. 1, 2, 3, AND 4, FOR EITHER STEAM, LEVER OR TREAD POWER.

All of which are guaranteed to give entire satisfaction. Our **THRESHERS** and **CLEANERS** have been thoroughly tested throughout the United States, and pronounced by the growers of **GRAIN, PEANUTS, BLACK and COW PEAS** as the most complete and satisfactory Thresher of the period. No grower of any of the above can afford to be without one.

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GEO. C. BURGESS, Gen'l Southern Agent, Burgess, Dinwiddie Co., Va.

And the world learns how they could do and die.

Amongst the most beautiful of Hope's poems is his memorial ode to Galt, the sculptor, between whom and himself a strong friendship had existed. It is a heartfelt, unstinted tribute of praise from one man of genius to another.

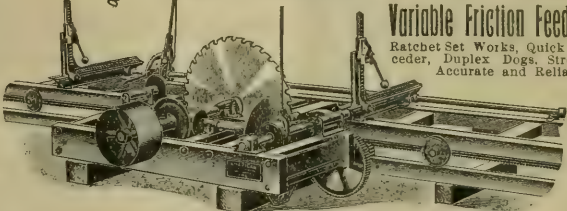
In addition of Hope's poetic talents he possessed a personality of rare charm, the embodiment of all that was best in the old South. His manners were courtly, and his powers of conversation great, characterized by ready wit, kindly humor and a fine command of language. Those who knew him best claimed that he showed at most advantage in his home life, his bright, loving spirit touching with poetry the prose of daily living.

His remains repose in Hampton and above them rises a shaft on which an inscription proclaims that it is, "The tribute of his friends offered to the memory of the Poet, Patriot, Scholar and Journalist, and the Knightly Virginia Gentleman."

Edward Sanford Gregory was born in Lynchburg, Va., August 19th, 1843, and died in the same city, December 19th, 1884. Although a very fragile child, he gave early indications of a very bright intellect, and absorbed information with great ease and eagerness. He was studying at the old Lynchburg College when the war broke out. Although a mere boy, he offered his services and was enlisted in the signal corps, continuing in the army till hostilities ceased.

At the close of the war he began teaching in the country districts, and whilst thus engaged, he wrote a letter for the Lynchburg Virginian, giving such unmistakable evidence of a talent for journalism that it led to his being offered a position on the local staff of the Lynchburg Republican, a Democratic journal conducted by Maj. Rob-

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\$150 Buys It on cars at factory, Freight Very Low.

Seven Other Sizes Made. Also Edgers, Trimmers, Shingle Machines, Lath Mills, Rip and Cut-Off Saws, Drag Saws, Cord Wood Saws and Feed Mills. Catalogue Sent Free.

On January 31, 1905, W. H. Greenwood, of Bennington, Vt., said: "I am using your No. 3 Saw Mill with a 15 H. P. Engine and average 5,000 feet per day. I am very much pleased with your machinery."

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SEED OATS FOR SALE

1500 Bushels VIRGINIA GREY WINTER OR TURF.

This is without doubt the best WINTER oat in America. These oats were sown in the fall especially for seed and are guaranteed absolutely true to name, are of a very superior quality and extra heavy. Grown in Albemarle County, in the Piedmont section of Virginia, where the best seed oats obtainable are produced. Samples sent on application. My crop this season is so large, that I have decided to reduce the price to 70 cents per bushel of 32 lbs. sacked, F. O. B. Charlottesville, Va. Address

WOODSIDE STOCK FARM, R. S. FARISH, Prop., Charlottesville, Va.

ert H. Glass. He was subsequently engaged on the staff of the Richmond Enquirer, which position he resigned to accept one on the staff of the Petersburg Index. He retained the latter position for nine years, writing also a great deal for other papers as well as magazines. While engaged in these arduous pursuits, he also prepared for entering the ministry of the Episcopal Church, taking the full examination with the graduating class at the Theological Seminary, near Alexandria, Va. But the strain proved too great for his health and he was never well after this.

Throughout his life, the undercurrent of poetry had been very strong with him, and it became increasingly so in mature years. As a youth he wrote many beautiful poems around the camp fires during the war. Everything beautiful, sad or noble in life sang to his mind in verse, and in later life, as his health became more delicate, the poetic tendency grew stronger and more intense. In 1881 he issued his first volume of verse, "Bonnie Bell and Other Poems," and in 1883 he published another volume entitled, "Lenore and Other Poems." It seems to me that Gregory's special mission is to be the poet of wedded love, the Coventry Patmore of our Southern literature. His warm, pure and beautiful strains on this theme appear to me the most distinctive and attractive feature of his writings. No better instance of this could be alleged than his "Kettle Song," or the poem "To My Wife on Her Birthday." Indeed it is remarkable how many of his poems are devoted to the portrayal of a pure, noble and perfect wedded love. The majority of poets depict love between a youth and maiden rather than between husband and wife, so I rejoice when a poet arises who devotes his powers to depicting the best and highest love of which human nature is capable—viz., the love of a truly united husband and wife.

Mr. Gregory has written a great many sonnets and lyrics, and I think he will live in our literature chiefly as the author of the best of these. It is hard to select amongst his sonnets as there are so many of nearly equal excellence, but I will subjoin one which struck my fancy especially.

Convalescence.

"When God's pale angel took thee by the hand,

THE SEABOARD AIR LINE RAILWAY

OFFERS
PROFITABLE
INVESTMENTS

THE MANUFACTURER,
THE STOCK RAISER,
THE DAIRYMAN,
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THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;
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TO STAUNTON, LYNCHBURG, CHARLOTTESVILLE,
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And Principal Virginia Points.

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ORGANIZED 1832.

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All descriptions of property in country and town, private or public, insured at fair rates, on accommodating terms
AGENCIES IN EVERY TOWN AND COUNTY.

W. H. PALMER, President.

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W. H. McCARTHY, Secretary.

And bore thee to the borders of this life,
Beyond its clamorous cries of toll and strife;
Thy spirit wandered near the heavenly land,
And viewed the white wings of its angel band,
And all bright visions of its perfect peace,
Thy soul drank deep its music, bland and grand,
And in its air, thy sickness found surcease,
And all thy seated sorrow its release.
Now when God gives thee back to love and prayer,
Thou bringest perfumed airs of trust and ease,
Blown from that glorious country far and fair,
The peace of God is pictured in thy face,
In sunnier rays from heaven, and ampler gifts of grace."

Another beautiful sonnet is the one entitled, "When This Cruel War is Over," also "The Lady of My Life," and "A Christmas Sonnet." Amongst Mr. Gregory's finest poems is the one entitled "Cross and Crown." This alone would suffice to ensure him a high place among contemporary poets. I would like to transcribe a part of this poem, but there is such a "chromatic sequence of fine thought" in it that it must be read as a whole in order to be duly appreciated. His poem

on Carlyle is very good and very discriminating. It opens thus:
"Thoe of the thinkers! Stilled at length
The thunders of thy hammer pen;
The 'smiting word' hath passed in strength,
And sacred silence falls on men."

In addition to his poetical gifts, Mr. Gregory was a man of fine scholarship. His range of information was great and exact, and his memory remarkably retentive. He translated a good many poems from foreign languages, "Lenore," (by the German poet Buerger) being the best known of these.

A notice of him that appeared in the Richmond Dispatch at the time of his death will show the estimation in which he was held. "Few men were better known to the Virginia public, or had made a more marked impression in various spheres of usefulness. As an editor, as a poet and finally as a minister of the Gospel, he exemplified some of the highest qualities of heart and head. His literary attainments placed him in the front rank of our literati, whilst his gentle manners, loveable disposition and fidelity to principle made him many warm friends. He lived and worked during the latter part of his life in an atmosphere of the beautiful and the good, giving to the world in song and sermon many thoughts that constitute eulogies of his character greater than others could pay."

WASHINGTON NOTES.

Uncle Sam Buying Goats in Europe.

Mr. George F. Thompson, the goat expert of the Department of Agriculture, who is now in Europe looking into the milch goat question, advises the Secretary that he is preparing to purchase some of the best types of European milch goats for importation into this country with a view to using them in improving and breeding up the few good milch goats which are scattered here and there throughout the United States. Of the two million or so goats in the United States, there are, as Mr. Thompson told me, only a few thousand that are worth anything as milkers. He sends the Department some photographs showing goats with astounding development of the udders and with a capacity of from four to eight quarts of rich milk every twenty-four hours. These goats are, of course, very highly bred and come in for excellent care from their owners. The secretion of milk is so great that it is necessary to milk them three times a day. Special interest is found in this work of the Department because goat milk during the summer time is in great demand by physicians. It is entirely free from tuberculous germs and is said to be of wonderful curative powers for sick babies, many instances being noted where it has saved the lives of sickly infants.

SHROPSHIRE SHEEP

We offer for sale at reasonable prices, the following
pure-bred SHROPSHIRE SHEEP

25 YEARLING BUCKS, entitled to registry

35 Buck Lambs,
ENTITLED TO REGISTRY.



50 EWES,
NEARLY PURE-BRED,
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These Sheep were bred and raised by the late C. A. Saunders on Meadow Brook Stock Farm, Culpeper Co., Va., and are the product of 15 years careful breeding from the very best Registered Shropshire Bucks. Anyone needing Shropshires will do well to communicate with the undersigned.

GEO. L. BROWNING & C. M. WAITE, Admrs. of C. A. SAUNDERS, deceased, Culpeper, Va.

The present demand for goat milk is far in excess of the supply.

Secretary Wilson and the Cotton Scandal.

The probing and investigation of the Agricultural Department grown out of what is known as the "cotton leak" is likely to result in considerable changes in that Department. It is probable that the President's Commission, which is now investigating the Government Printing Office and which is to later take up the Department of Agriculture, will recommend a number of changes in the organization of that Department. The Department is generally recognized as doing excellent work in all its branches, but it is pointed out that there are several of its divisions which are doing work similar to that done in other departments of the Government. The work for which the Keep Commission was appointed was to broadly investigate the question of organization throughout all the departments and eliminate the overlapping of work. The probing of the Government Printing Office and the statistical branch of the Department of Agriculture is merely an incidental duty.

No credence is given in Washington to the statement that Secretary Wilson is to resign because of the collusion between Assistant Statistician Holmes of the Bureau of Statistics, and certain cotton brokers. The Secretary has relied upon the work of the Government secret service officials

and has taken prompt action to prevent any additional leakage of information. That he will retire from the Cabinet, "under fire," is practically an impossible contingency. Even in the Post-Office Department scandal, where Secretary Payne at first refused to have the charges made investigated, and showed a disposition to smother the whole thing, President Roosevelt stood by him until the Department was purged of scandal. The situation with the Department of Agriculture is not analogous, as Mr. Wilson has at all times been open to suggestions of dishonesty in cotton statistics and in every case where charges and information were lodged with him, has immediately called in the secret service officials.

The United States Weather Bureau has 190 regular stations, variously located over the country, at which are taken accurate and comprehensive records of meteorological conditions, besides there are in operation over 3,000 volunteer observation stations, where records are kept by public spirited citizens, of temperature, precipitation, wind direction, etc., using instruments loaned them by the Government. The regular stations telegraph three times daily all conditions, and from this information the Washington office makes up the indications of what the weather is liable to be for a day or two. Long experience has shown that it is impossible to predict what is going to happen beyond a couple of days. Certain prognosticators and almanac makers,

seasonal predictions, and some newspapers go so far as not only to print but even pay for these long time forecasts, based, it is claimed, upon moon signs, planetary movements, etc., which in the opinion of scientific men who have spent their lives in observing the atmosphere and the sky under the most favorable auspices, is ridiculous. It is safe to predict snow and cold waves in the winter in the Northern States, and rain and sleet in the South, while thunder storms and severe winds are liable in the warm seasons in all parts of the country. Should unusual disturbances occur on a date given by the long time guesser, he makes the most of it with the public, while the Government observer who announces predictions covering a day is "roasted" if it should happen to rain when all indications pointed to a fair day.

Rapid advances are being made by Germany in manufacturing enterprises and in value and quality of exports of goods to other countries, due, it is said, to the proficiency of workmen, many of whom prepare for active duty by taking courses in technical schools, nearly every occupation now being represented. A school for millers recently taken in charge by the municipality of Dippoldisdorfe has a teaching staff of eight professors, and is equipped with all the latest machinery, besides having models and milling machinery of every design. The course covers every feature of the work, practical, theoretical, and commercial. Travel-

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Dundlop Flour, per barrel.....	\$5.50
Good Teas, Green, Black and Mired, per pound.....	30c, 40c, 50c, and 60c.
Onion.....	50c.
Granulated Sugar, per pound.....	5 1/2c.
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Good Salt Pork, per pound.....	7c.
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Pure Lard, per pound.....	19c.
Good Lard, per pound.....	15 1/2c.
American Oats, per package.....	7c.
Mother's Oats, per package.....	9c.
Daisy Flour, per barrel.....	\$5.25
Flourish Flour, per barrel.....	7.00
Cut Herrings, per dozen.....	8c.
Roe Herring, per dozen.....	15c.
Cut Herrings, half barrel.....	\$3.90
Cut Herrings in barrels, new.....	3.25
N. C. Roe Herring, half barrel, new.....	2.75
Salt, 100 pound sacks.....	95c.
Salt, 100 pound sacks.....	95c.
Sugar Cured Ham, per pound.....	15c.
Best Timbuh-Hay, per ton.....	21.00
Best Bran, per ton.....	21.00
Brown Stuff, per ton.....	22.00

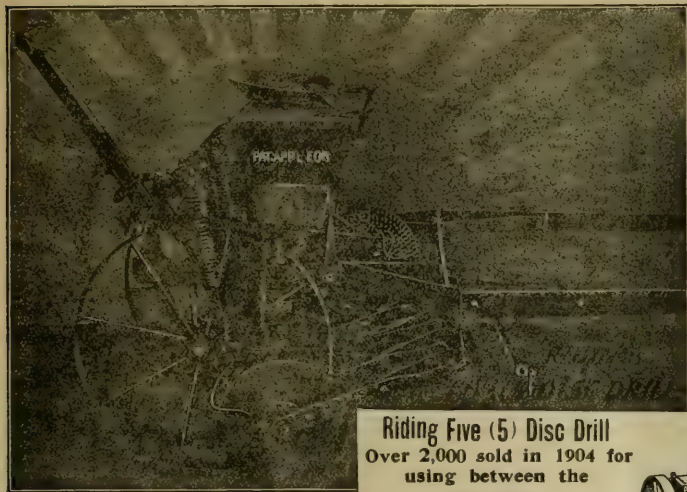
Cut Herrings, half bbls.....	2.00
Ship Stuff, per ton.....	\$22.00
Corn and Off Chop, per ton.....	24.00
Coarse Meal, per ton.....	16c.
Mackerel in Kits, per kit.....	1.00
Lake Herring in Kits, per kit.....	75c.
Table Peaches, per can.....	11c.
Large Can Tomatoes.....	16c.
Small Can Tomatoes.....	16c.
Lump Starch, per pound.....	4c.
Sardines, per can.....	12c.
Best Feed Oats, per bushel.....	45c.
Rice, per pound.....	5c., 7c., 8c.
Hominy, per pound.....	24c.
Genuine N. O. Molasses, per gallon.....	60c.
Porte Rice Molasses, per gallon.....	35c.
Breakfast Bacon, per can.....	15 1/2c.
Best Cream Cheese, per pound.....	15c.
Best Water Ground Meal, per bushel.....	75c.
Octagon Soap, per bar.....	4c.
Butter Soap, 11 cakes per.....	35c.
Circus Soap, 7 bars for.....	25c.
Lenox Soap, 7 bars for.....	25c.
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Smoked Bacon, per pound.....	11c.
Small Can Good Luck Powders.....	4c.

Good Corn, per bushel.....	70c.
Large Can Good Luck Powders.....	8c.
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Three Pigs Peach, Grape, Plum and Sun.....	1.00
Cured Tobacco for.....	25c.
Can Corn, per can.....	8c.
Sun Dried Apples, per pound.....	7c.
Old Crow Rye, per gallon, 6 yrs. old.....	\$3.00
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Virginia Mountain Whiskey, per gallon.....	1.50
Genova Gin, per gallon.....	1.50
London Dock Gin, per gallon.....	1.50
Pure Apple Brandy, per gallon.....	1.50
Good N. C. Corn Whiskey, per gallon.....	1.50
Five Year Old N. C. Corn Whiskey, per gallon.....	1.50
Blackberry Wine, per gallon.....	90c.
Catawba Wine, per gallon.....	90c.
Old Gibson Whiskey, per gal., 5 yrs. old.....	3.50
Duffy's Malt, per bottle.....	80c.
Ten cents extra per gallon charged for jugs. These f. o. b. here. Drayage free. No charge for packing. Remittances must accompany all orders.	

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Over 2,000 sold in 1904 for
using between the
corn rows.

With Grass Seed Attachment. With 3-Row Garden Seed Attachment. With 2-Row Corn Drill Attachment.

For the Farmer, Truck Farmer and Gardener. Plain or Fertilizer.

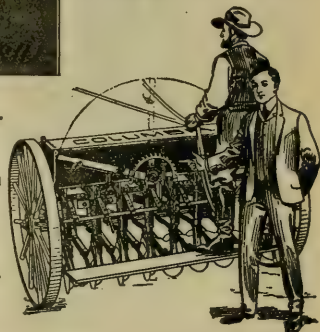
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20th Century-Line

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OUT-OF-DATE MACHINES

THE ONLY COMPLETE DISC DRILL
Patented Longitudinal Lever

1. Out of the way for filling Hopper
2. For storing away for winter.
3. For using with Foot-board or Gang Press Wheels.
4. Easier to operate at all times.
5. Easy to operate when sitting on Hopper.

ling schools for country girls in which they are taught the principles of practical housekeeping, cooking and farm work are in operation in several of the German States. The teachers are educated women, who themselves are graduates of the Government schools of housework.

Skim Milk for Butter Making.

The Department of Agriculture notes a new method of making butter in Great Britain where instead of using water for washing the butter, separator skim milk is used, which has been twice pasteurized. Salted and unsalted butter prepared in this manner contained, respectively, 11 and 13 per cent. of water, the former containing only one-fifth as many bacteria. Further experiments are being conducted at the British dairy institute and it is considered that the results are sufficiently interesting to warrant calling the attention of butter makers who have an impure water supply, to this simple method of overcoming that difficulty arising from washing butter with water filled with bacteria.

Food Poisoning.

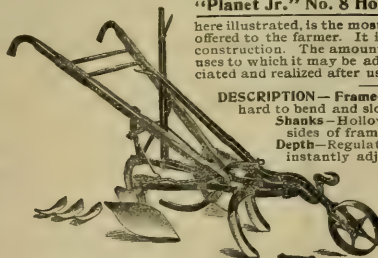
In a recently published story of East Indian life it is related how a murderous native servant, gradually and systematically poisoned an entire English family, employing the insid-

"PLANET JR." FARM AND GARDEN TOOLS

Seed Drills and Wheel Hoes combined. Single Wheel Hoes, Double Wheel Hoes, Cultivators, Horse Hoes, Sulky Cultivators.

"Planet Jr." No. 8 Horse Hoe & Cultivator

here illustrated, is the most complete of its kind ever offered to the farmer. It is stronger in design and construction. The amount of work and variety of uses to which it may be adapted will only be appreciated and realized after using one for a season.



DESCRIPTION—Frame—Extra long and high—hard to bend and slow to clog.

Shanks—Hollow steel and clamping both sides of frame, strengthening each.

Depth—Regulated by wheel and runner, instantly adjusted by lever.

Expansion—By lever from 9 to 25 inches.

Side Hoes—Are for taking from and putting to the crop. Set at all angles and are reversible.

Can be removed and small steels put on.

"Planet Jr." Catalogue—Postage free to anyone, also our own illustrated catalogue. Trade discount to dealers on all Planet Jr. goods.

FULL LINE FARM TOOLS AND SUPPLIES

Norfolk Farm Supply Co.

WHOLESALE AND RETAIL

Address Care Dept. No.

41-51 Union St., Norfolk, Va.

ious poisons of the country and occupying some ten years in finally making an end of his victims. The description is enough to make one thankful that he does not live in a country where such practices, impossible to guard against, are prevalent. Perhaps we have failed to overlook the fact that here, in democratic United States, where the people rule, or think they do, manufacturers and preservers of food supplies are systematically poisoning entire communities, not single individuals or families but thousands of families. Except where State laws have to some extent clipped their wings, the big food and canning houses are selling foods of every sort adulterated to such an extent that as the Government and State chemists assert people who live largely on canned and preserved products get three or four considerable doses every day of coal tar and other poisons and acid and alkaline preservations, never intended for the stomach of man.

North Carolina has enacted a law regulating the sale and inspection of stock feeds. Under the State analysis, of 37 samples of wheat bran examined, 10 contained corn bran. Of 123 samples of cotton seed meal examined, 21 samples were below the legal standard as to the amount of protein required. The first report under the new law points out that while corn bran, rice chaff, ground corn cobs, peanut hulls, etc., may not be deleterious, yet when mixed with better feeding stuffs, with-

out proper label, they ought to be regarded as adulterants. Examinations now show that such materials are being largely used in the stock feeds for sale in North Carolina.

GUY E. MITCHELL.

God bless the cheerful people—man, woman or child, old or young illiterate or educated, handsome or homely! What the sun is to nature, what God is to the stricken heart, are cheerful persons in the house and by the wayside. They go unobtrusively, unconsciously, about their mission, happiness beaming from their faces. We love to sit near them. We love the nature of their eye, the tone of their voices. Little children find them out quickly, amid the densest crowd, and, passing by the knitted brow and compressed lip, glide near, laying a confiding hand on their knee and lift their clear young eyes to those loving faces.—A. A. Willits.

"I've just been reading some statistics of births and deaths. Extraordinary thing! Every time I breathe a man dies!"

"Great Scott! Why don't you chew cloves?"—Grocery World.

So oft the doing of God's will
Our foolish wills undoeth;
And yet what idle dream breaks ill,
Which morning light subdueth?
And who would murmur and misdoubt
When God's great sunrise finds him out?
—E. B. Browning.

Mrs. Smilax: Henry, I really believe Freddy is going to be a doctor when he grows up. I heard him tell Mary that she must be careful of her health, and that pie was considered hurtful.

Mr. Smilax: It looks to me as though he is more likely to become a lawyer. I noticed he had two pieces of pie at supper last evening.—Boston Transcript.

The man who simply sits an' waits
For good to come along,
Ain't worth the breath that one would take

To tell him he is wrong.
For good ain't flowin' round this world
Fur every fool to sup;
You've got to put yore see'ers on,
An' go an' hunt it up.

Correspondent: "You saw what the papers said about you this morning, I presume?"

Retired Millionaire (president of a great corporation): "No; I don't know what they said about me, but you may say for me, sir that there wasn't a word of truth in it."—Chicago Tribune.

To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month.

Lee's Prepared Agricultural Lime

... FOR ...

Wheat, Oats, Clover, Alfalfa and other Grasses
HAS BEEN USED SUCCESSFULLY FOR 25 YEARS.

Our High Grade Bone and Potash Special Wheat Fertilizer
HAS GIVEN GOOD RESULTS WHERE USED.

Our new WHEAT and GRASS GROWER is prepared on a formula based on experiments of 5 years.

ANALYSIS:

Phosphoric Acid (Thomas Basic Slag),	8 per cent,
Ammonia, - - - - -	1 per cent.
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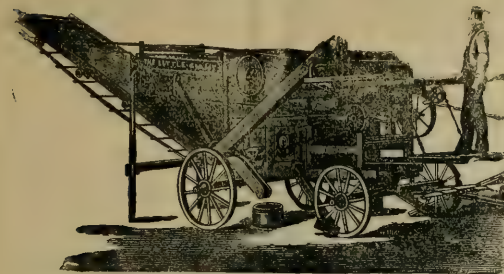
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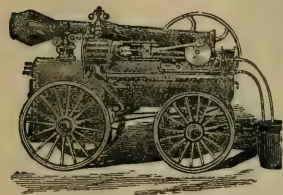
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The Post, Washington, D. C.	6 00	6 00
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY

66th Year.

Richmond, Va., September, 1905.

No. 9.

Farm Management.

WORK FOR THE MONTH.

The continuous wet weather, which we noted as the feature of July up to the time of writing our article on Work for the Month in the last issue, continued up to the end of the month and for the first days in August, after which time the skies cleared and we had a week or more of fine weather, followed again by showery weather up to the second week in the month. Since that time we have had up to this writing (22d August) hot, dry weather. July was the wettest July we have had in the South for ten years, and much damage was done to wheat and oats in shock and uncut, and corn and other crops on lowland also suffered. To some extent this has been repaired by the drier weather of August, but nevertheless much damaged wheat and oats were found when threshing was able to be resumed. This must seriously affect the yield of these crops in marketable grain. Corn, except upon the wettest of the lowlands, is making a most wonderful growth and bids fair to be one of the finest crops and one of the largest ever grown in the South. The yield and quality of the hay crop is distinctly below the average, though this bids fair to be somewhat made up for by luxuriant second crops if only we have fine weather to harvest them. Forage crops of all kinds have made splendid growth and promise to supply an abundance of feed for the winter if the weather only now holds up and permits them to be well cured. Cow peas are especially difficult to cure in showery weather, especially after a long, wet season like we have had this year during growth. The vines

become so luxuriant and so full of sap that they need plenty of wind and sun to cure them, and require much more time to fit them for storing. In a season like this it will be well to let the crop remain uncut much longer than is usually done, so that the vines may mature more fully and the sap be more exhausted. They will then cure quicker when cut and with less wind and sun. One of the most successful farmers in the State, who makes a large quantity of pea vine hay every year, tells us that he finds the only way to successfully cure the hay in a showery season like this is to set four poles in the shape of a pyramid and to nail cross pieces about a foot from the ground to the four poles, allowing them to project a foot outside each pole, and then to pile the newly cut pea vines around these poles and above them, as high as convenient. This ensures a draught through the centre of the cock, and he says that he never fails to make a perfect cure. He cuts after the dew is off in the morning, only just as much as he can put up during the day. He says he has now in the field a large number of these cocks perfectly cured notwithstanding all the rain we have had. Sorghum and soy beans should be cut and set up in shocks like corn or oats, and will cure out perfectly and suffer very little damage from even long continued wet weather. They should be allowed to wilt well after being cut before being put up. Don't make the shocks too large in a season like this.

Tobacco has suffered from the long continued wet weather, and unless we have now fine, warm weather

is likely to cure up thin and papery. The gum has been washed off the plants. The area in this crop, except in the bright yellow new belt in North Carolina, is less than usual, and if we could only have a warm dry time now to thicken up the crop and ensure a good cure the prospect would seem good for a fair price.

We hear considerable complaint as to the peanut crop. It is badly in the grass, and unless we have drier weather "pops" are likely to be almost as numerous as nuts. Even with the best of weather the crop is certain to be short.

Meadows and pastures are looking fine. With dry weather to cure the hay, second crops of clover and grass will make good any deficiency in the first crops.

The Government report on the winter wheat crop figures out a yield of 14 bushels to the acre, and a gross crop of over 400,000,000 bushels. We doubt very much the reliability of this estimate of marketable wheat, as from every section we hear of serious damage to the wheat in shock, and from several sections of very unsatisfactory yields from crops which looked in the field like making good returns. The spring wheat crop is not yet out of danger from damage by rust, which, from the latest information we have, is spreading in the Northwest. The Government report estimates the total crop of winter and spring wheat at 690,000,000 bushels. We doubt much whether this is likely to be realized. We think 650,000,000 bushels will be an outside yield. Even though this or the Government estimate be realized, we do not see any reason to think that the price of wheat will fall; rather we are inclined to believe that it will advance in price, as there is likely to be a good European demand. The Russian crop is reported to be largely a failure. Spain is already suffering in many provinces from famine, and the French crop is not by any means a large one. The English crop is much above the average both in area and estimated yield, this being placed at an average of 35 bushels to the acre, but the harvesting season is not yet over in that country, and much may yet happen there to reduce the quantity of marketable wheat. Whatever happens, England is bound to be a large buyer, as that country, with the best of weather, will not make one-third of the wheat needed to feed the people. With a population of 82,000,000 people here to feed, and this large foreign demand and no surplus left over from last year's crop wheat is not likely to go begging for buyers. We now need for our

own people and for seed over 500,000,000 bushels per year. This demand at home and the needs of Europe will, we think, make wheat good property to hold for a better price than is now offered.

Corn bids fair to make the greatest crop ever made in this country, and yet withal, the price keeps firm, showing that cribs are largely empty in the West.

The cotton crop prospect does not improve, and the indications now are that it will not exceed 10,000,000 bales at the best, and may fall much short of even that quantity. It is certain that the price must keep firm, and probably will advance, as the demand for export is good, and both American and European consumption by the mills is constantly on the increase. The English cotton factories never were busier, and owners there have just conceded an advance of wages to the operatives.

Virginia is in an exceptionally good position with her apple crop. We have in this State the best showing of apples of any State in the country. In New England and New York the crop is largely a short one, and for our fruit there is bound to be a good demand. Don't be in too great a hurry to sell. Apples will be worth more money.

The principal work requiring attention during the month, beyond the saving of the forage and second crops of hay and clover and the filling of the silos with the corn crops grown for that purpose, will be that of preparing the land for and seeding the winter oat and grass crops, and preparing the land for wheat.

Winter oats should be got into the land as soon as it can be got into condition. Long experience with this crop in the South, and especially in this State, has conclusively shown that unless oats are seeded in September it is doubtful what the result may be. If seeded in September and put into good land, and that land be given good preparation, a yield can be counted on unless the winter is exceptionally severe, which will make the crop a profitable one. If oats are to be grown at all in the South, the fall seeded crop is the only one which should be sown. Sown in spring the hot weather comes too soon to allow of the crop being a success, except in abnormally late summers. Whilst oats will make a crop on poorer land than wheat, yet it is not at all a wise policy to follow the practice so universal of putting them on to the poorest land under cultivation. If the crop is to

be grown, and we advise that it should be grown, as it makes such fine feed for stock both in the shape of grain and straw, give it a fair show for success. Plow the land well, and if not rich, give it two or three hundred pounds of acid phosphate to the acre, and put into fine condition before seeding. On light land it may pay also to apply 50 pounds to the acre of muriate of potash, but on most of our lands this is not needed. Land so treated and prepared should make a yield of from 50 to 75 bushels to the acre. The best variety for fall seeding is the Virginia Grey winter oat. Sow three bushels of seed per acre. We recognize that such heavy seeding as this is unusual in the South, but our experience in growing oats has convinced us that heavy seeding is desirable. Much less risk is run of winter killing when there is a good cover of oats on the land, and you cannot expect to harvest a heavy yield without sufficient plants on the ground to carry the grain. Much winter killing of oats can be avoided by putting the seed well down into the land with a drill or by covering deeply when sown broadcast with a cultivator. A top dressing of nitrate of soda at the rate of 100 or 150 pounds to the acre applied in spring after the crop has commenced to grow is often very profitable. Such an application has, in many cases, caused an increased yield of 20 to 25 bushels to the acre. After the crop has been sown and harrowed in see that plenty of water furrows are opened so as to ensure good surface drainage. It is most important to keep water from standing on the crop if winter killing is to be avoided.

In our August issue we gave some advice as to the preparation and sowing of grass and clover, and to this refer our readers. This work of preparing the land and sowing grass and clover should have immediate attention, as if the seeding is to have that fair chance of success which is due it the work should be completed by the end of this month at the latest. We had a large grass grower, and one of the most successful in the State, here this morning (22d August), and he told us that his land was already prepared and fertilized and in the finest condition for seeding, and that he had commenced seeding to-day. This man makes over three tons of hay to the acre in Southside Virginia, and always completes his seeding in August, if possible. Land intended to be seeded in grass should be prepared in the best manner possible, and be well drained. Deep tillage is essential to success. The roots of perennial grasses always seek a lower level, and to retain a luxuriant growth must be able to get down in the soil, and

must have that soil as finely broken as possible, so that the fine rootlets can penetrate it, and yet it should be made compact, so that the capillarity of the soil is well preserved and thus moisture be always accessible to the roots. It should be plowed, cross plowed, harrowed and rolled, and reharrowed until as fine as a garden bed to the depth of at least ten inches. Another great essential to success is that the land should be rich. It ought to have been worked previously in cultivated crops for a couple of years, so as to get rid of the weeds, and these crops should have been well manured with barn-yard manure or leguminous crops plowed down, so as to have filled the soil with vegetable matter, and one ton of lime to the acre should have been applied. In the absence of such preparatory cultivation and fertilization the soil will be apt to run together and become too compact for the continued well doing of the crop. After the land has been well prepared then sow 400 or 500 pounds of bone meal to the acre and work well into the soil. Then sow the seed and let this be done with no niggardly hand. Not less than two bushels of seed to the acre should be sown. Half the seed should be sowed in one direction and half in the other, and the land should then be harrowed in both directions, and if dry enough should be rolled. Sow no grain with the grass seeds, and then a good crop of hay may reasonably be expected next year. For a meadow, sow orchard grass, tall meadow oat grass and herds grass mixed in equal parts, and eight to ten pounds of red clover or sapling clover. For a pasture add to the above grass seeds, meadow fescue and Virginia blue grass, or on limestone soils Kentucky blue grass. If timothy is desired sow it alone or with only herds grass mixed with it. If to be grown for a sale crop, timothy alone should be sown.

In our August issue we wrote very fully on the growing of alfalfa, and to that issue refer our readers. Alfalfa should not be seeded later than the middle of the month. If not got in by that time wait until spring.

Continue the sowing of crimson clover and hairy vetch during this month on all land that is not to be put into some permanent fall seeded crop. With the clover sow a mixture of wheat, oats and rye, say ten or fifteen pounds of clover with three-quarters of a bushel of the grain mixture to the acre, and with the hairy vetch sow half a bushel of wheat or winter oats to the acre. Both these crops make good winter and spring grazing, and early forage and hay crops, and can be turned down with great advantage for the

corn crop in May. In our last issue we wrote very fully on these crops, and refer our readers thereto.

Rape and turnips may still be sown, though it is getting late to put them in. However, with the ground so full of moisture and so warm as it is at present they will if sown at once, stand a better than ordinary chance of making good crops.

The preparation of the land for the wheat crop should have constant attention during this month, so that the land may be in a fine condition for seeding after the first frost. Perfect preparation of the land so that while it is broken to a good depth it is yet compact beneath the surface, and with three or four inches of fine surface soil will do more to secure a good yield than any fertilizer used. A dressing of one ton to the acre of lime will greatly help to ensure a good yield. This should be applied after plowing the land, and be worked in. Numerous experiments made in every section of the country go to show that phosphoric acid is the dominant factor needed in a fertilizer to ensure a good yield of plump wheat. It does not matter from what source this phosphoric acid is obtained, whether from bone or from rock, so only that it is there. The advantage in using bone is that it carries a small percentage of nitrogen, which helps to give the wheat a start. Personally, we prefer to use both bone and rock, say in equal parts. This ensures a supply of phosphoric acid during the whole growing period of the crop. Three hundred or four hundred pounds to the acre, half bone and half rock, makes a good fertilizer for the crop. This is better applied broadcast than in the drill, as this encourages the tillering of the crop over the whole land rather than just a growth in the drill rows. The best variety of wheat to sow is one that matures early, so that it ripens before the rust period, which is not usually troublesome until warm weather has set in permanently. A variety which has been grown in the section successfully is almost always more certain to make a good crop than seed brought from a distance. Amongst the best varieties for the South are Fulcaster, Fultz, Poole and Harvest King. There is no difference in the average yields of bearded and smooth varieties. If fly has been troublesome this year a catch crop of wheat should be seeded at once. Sow a patch across the field as soon as possible, and the flies will lay their eggs in this, and then this should be turned down and rolled, so as to smother both flies and eggs.

Have all necessary repairs made to barns, stables

and sheds, and have all stables and sheds thoroughly lime washed, so that they may be ready for the stock to be put into when the nights become too cold for them to remain outdoors.

Clean out all manure from barns, stables and pens and put on the thin places of the land intended to be cropped.

See that the silo, if you have one, is thoroughly cleaned out, and the inside should have a coat of tar and pitch mixed and applied hot. This will preserve it and resist the action of the acids in the silage. When filling the silo cut half the day and fill half the day. This will enable you to put much more silage in the silo and ensure its heating and settling better. Take care that round the sides of the silo the cut forage is trodden solid and kept well filled up level with the centre, and that the corn ears are equally distributed all over, so that each part of the silage is equally rich in feeding matter. Cover the silage when all is in the silo with a foot of cut straw, chaff, cotton seed hulls, or marsh hay, and water this freely so as to saturate it. This will then mat together with mould and seal and keep the silage perfectly.

AN EXPERIMENT WITH JAPAN CLOVER ON LIME STONE SOIL.

Editor Southern Planter:

Three years ago I obtained an excellent stand of Japan clover on well drained, rather thin, limestone soil. To-day there remain only a few scattered stalks of the clover. Two years ago I sowed a larger area of better limestone land on the 10th day of March. Considerable cold weather afterwards killed all the early plants that came up, leaving only about one-fourth of a stand. The stand has gradually grown worse until now there remain but few stalks scattered over the field. I am convinced that the seed should be sown very late in the spring, after freezing weather is past.

The clover grew only about six inches high, and was very late in starting. All grasses and other clovers on my farm were up from six to eight inches high when the Japan clover began to "show up." It afforded pasture only about three months of the year, even then the stock would not eat it when they could get other clovers and grass. "As for fighting" the broom sedge, for which purpose I sowed it mainly, it was an entire failure on my soil. In "Eastern Virginia" it is claimed to do much better. (It undoubtedly will run out broom sedge in Eastern and Middle Virginia.—Ed.)

At the present time, when there is so much written about leguminous plants as soil improvers, my experience with this clover may be worth something to other farmers who have limestone soil. In this connection, I wish to state that tall meadow oat grass is "putting up the best fight" against broom sedge of anything I have yet tried. I may have more to say about "tall oat" in the future, since no conclusions can be drawn from one year's experience.

If some good method can be found by which to kill out broom sedge which seriously threatens many good blue grass pastures of Southwest Virginia, it would be a most valuable thing for the farmers in many parts of this section. "I, for one, am in the fight."

I believe it is almost useless to try alfalfa on a broom sedge sod. In fact, land that I consider rich brings very poor corn when I turn under a broom sedge sod.

R. H. PRICE.

Montgomery Co., Va.

Japan clover is a warm climate plant and not adapted to high elevations or northern latitudes, whilst in the Gulf States it makes a heavy hay crop. Here in Virginia we have never seen it more than twelve inches high, and more generally not more than six inches high at the best. We never advise its being seeded except upon broom sedge land, where it can be left to make its own way at its own time. In this section of the State it soon runs all over the field and makes considerable pasturage.—Ed.

AN EXPERIMENT IN RESETTNG A MEADOW.

Editor Southern Planter:

Having a piece of meadow land upon which there was a "half stand" of clover and orchard grass I decided to reset the land. My object was to get a good stand of grass to mow next year. The clover came to head and had turned brown when it was mowed last of June, and the crop left upon the land. The soil was turned first of July, and it broke up mellow and in fine condition. Several packing rains then fell upon it. After the ground became dry enough a smoothing harrow was run over it, then a heavy plank drag and the smoothing-harrow again. I then found the ground level and smooth on top, with an excellent seed bed. Then I sowed on the 1st day of August five pounds alfalfa, ten pounds Randall grass seed, and fourteen pounds timothy seed per acre. The smoothing harrow was again run over the ground. My selection of seed may seem a little strange to some farmers, as it is outside of the ordinary selection. The alfalfa was sown to inoculate the soil with alfalfa bacteria, with the probability of seeding the land to alfalfa later on. While the Randall grass is a little earlier than timo-

thy still I think it can be cut with timothy, and will make an excellent hay. We expect this grass to be there when the timothy is gone. While timothy makes about two excellent hay crops on this soil, then it begins to disappear. The Randall is expected to ripen some seed and grow thicker. The main bulk of seed was timothy, because it is about the best hay grass we have. However, it seems to exhaust the land considerably, leaves it in a compact condition, and makes but little fall growth during ordinary seasons. Randall makes a good fall growth. The seed from the clover turned under is expected to come up and make a fair stand of clover to help keep up the supply of nitrogen.

Twenty days after the seed was sown the stand was beautiful over the land. It will go into winter with a growth of about five inches. I will have more to say after the hay crop is cut next year.

Montgomery Co., Va.

R. H. PRICE.

Randall grass is more commonly known in the South as Meadow Fescue or English Blue Grass, under which name we frequently advise its being sown.—Ed.

SYSTEM IN FERTILIZING.

Editor Southern Planter:

"System" has been defined: "Method, order, regularity"; while without system everything is chaotic, haphazard, disordered, irregular, and the final results and consequences largely owing to chance. More especially is this the case with the use of concentrated chemical and commercial fertilizers. There is a right time to apply them, and a right way of applying them, a right (as well as a wrong) place to put them; and even a right way and time to purchase them. When intelligently handled and judiciously used they are labor savers and money makers; while, when handled in an ignorant, careless and haphazard manner and applied without judgment, they are liable to cause loss and be quite a prolific source of dissatisfaction.

It is wrong to put off the purchase and hauling home of fertilizers until planting time in spring. It is wrong even to apply either phosphates or the potash salts at planting time, whenever and wherever they could have been applied sooner.

It is wrong to put concentrated fertilizers in a circumscribed space—in the drill, or under the hill of any crop with which we are acquainted; not even excepting such tap-rooted crops as parsnips, carrots, salsify, radishes, beets, etc.

It is wrong to allow any of the more concentrated fertilizers to be allowed to come into immediate contact with seed of any kind, as their concentrated, caustic nature tends to damage the seed.

It is wrong to apply even stable manure in the

drill for the Irish potato crop, on account of its tendency to favor scabiness in the potatoes.

It is wrong to purchase fertilizers until we have first utilized to the fullest possible extent the strictly home product in the way of manure. (It is doubly wrong not to keep stock and make all the manure possible.—Ed.)

It is wrong to imagine that home manures are perfect, or even the best fertilizers for all crops on all soils.

It is wrong to fertilize any of the leguminous crops with nitrogenous fertilizer, except on very poor land, and then only enough to give the young plants a start. They should be forced to obtain their nitrogen from the atmosphere instead of the soil.

It is often wrong to buy nitrogen wherewith to fertilize any of the general farm crops, it is cheaper, and more profitable to raise it right at home in the field where it is needed and without the expense of buying or the trouble of hauling and distributing it, by the persistent practice of a systematic rotation, in which the legumes freely enter.

It is wrong practice to plant leguminous crops of any kind as a renovating crop, and omit to apply the necessary amount of phosphates and potash to insure a luxuriant growth and the absorption of the greatest possible amount of nitrogen from the air.

It is wrong practice to get an excess of nitrogen (valuable though it be) in any given soil. If there be an "excess" at all, let that excess be of phosphoric acid and potash. Soil that grows abnormally-large plants (of any kind) which bud, flower and fruit poorly, have more nitrogen proportionately than mineral constituents and need phosphoric acid or potash, or both, to aid the fruit or seed producing function.

It is not good business policy to purchase low grade (8-2, 8-2-1½ or 8-2-2) fertilizers at all, as they are not suitable mixtures for any of the crops for which they are recommended by the manufacturers; they are not rightly proportioned, hence best results cannot follow their use. (All the foregoing condemned methods and practices are, more or less, followed by most farmers in the South.—Ed.)

For lack of both space and time, I must forbear any further comment on irregular and irrational methods and practices for the time being, as (we think) enough has been said to show the necessity existing for the substitution of a system under which chance work and haphazard methods may be exchanged for certainties and the system of application which gives the greatest return for the outlay incurred be determined and rigidly followed. There is a great deal in the "knowing how," but knowing how doesn't necessarily bring success unless we do as good as we know, and doing doesn't commonly amount to much unless some system is introduced into our business, and system doesn't amount to much unless it be a right system, and no system is

a right system that does not give the greatest return for the outlay incurred—in other words, maximum crops must be made, at minimum expense—and no crops can be made at a minimum expense where a systematic rotation, in which the legumes freely enter as often as every second or every third year, is omitted; and no legume can do its best towards maintaining or increasing fertility unless liberally fed with both phosphates and potash. They must be made "nitrogen hungry" before they will work to advantage in appropriating atmospheric nitrogen; the way to make them nitrogen hungry is to feed them liberally with both potash and phosphoric acid. There is no real enrichment of the soil where these substances are not added. G. H. TURNER.

Whilst we are heartily in accord with our correspondent in his condemnation of the want of system so common amongst farmers, and also in his condemnation of the wasteful and unwise use of fertilizers, yet we must not be taken as acquiescing in his conclusion that there is no enrichment of land unless both potash and phosphoric acid are used in the fertilizer. Careful experimentation has demonstrated beyond a peradventure of a doubt that in large sections of this State, between the Blue Ridge and the ocean, no potash is needed in the fertilizer, except for the production of the special potash consuming crops like tobacco, Irish potatoes and vegetables. The Blue Ridge Mountains are rich in potash, and this through the ages has been washed out, or otherwise carried out, over the plain country between the mountains and the sea to such an extent as to make the lands sufficiently rich in potash for all staple crops if only the existing potash is made available by the use of lime. What our lands mostly need is humus first, and then phosphoric acid.—Ed.

MR. CLARK'S EXPERIMENT IN ALFALFA GROWING.

Editor Southern Planter:

Here is my first report on growing alfalfa upon three and one-half acres of a high, dry, mostly gravel knoll, 100 feet above the water line. The field was first most intensely cultivated to the depth of six inches or more, and made as soft as that kind of earth can be, and was as fine as an ash heap, then I sowed 25 pounds of alfalfa seed and 800 pounds of fertilizer made of one-third each of bone, muriate of potash and nitrate of soda to each acre, then harrowed lightly in four directions with my smoothing harrow, with the board removed. I then rolled it. This work was completed June 3d. On the 25th of July I cut the first crop, fifty-two days from the

time of seeding. Height at the time of cutting was 12 to 22 inches, average 16 inches or more. One-tenth of the plants were in blossom, which is the rule for cutting alfalfa. In one corner of the field there was a little purslain and scattered over the field there was some of what we call June grass, otherwise the alfalfa was quite clean. The first four days after cutting were clear sunshine, the next four were partly cloudy, with some very light rain, the next four days were bright sunshine, twelve days, eight perfect, four not bad, with four to finish, August 5th. It was carefully heaped every night.

Result was 10,500 pounds of dry hay in barn, 3,000 pounds to the acre in fifty-two days. I carted the alfalfa off the field as soon as possible after cutting, then sowed half as much more alfalfa seed and harrowed it in with my Double Action Harrow in two directions, set at a light angle. My object in doing this was to reset it and improve the stand. Remember, there is no fear of getting on too much grass seed. I have used my Cutaways for resetting alfalfa many years, all along the west coast and in the arid regions. I am now sending a large car load of Double Action Harrows to Los Angeles, Cal., to be used in resetting alfalfa.

Scientific men say that certain bacteria are necessary to start a new field of alfalfa. They say that they fasten on the roots and aid the plant to gather nitrogen. I think they are correct, but I have none. I have been hunting among the roots for bacteria a month or more, hereafter I shall hunt for tops and let the roots take care of themselves. In this dry weather the roots are hunting for water; looks as if they were finding it. Six inches growth in twelve days, timothy stubble a month old side by side not yet started.

I am just in from the field, the thirteenth morning after cutting. To my surprise I find some of the alfalfa eight inches high. Its average height is fully six inches. Neighbors said I would kill it, others said it would turn yellow and die, being without bacteria. No grass will die when it has anything to live for. I now expect quite a large second crop before frost.

Will report later and perhaps add it to my grass circular. By the way, if your patrons want to know how to make money and five tons of timothy and red top hay to the acre tell them to send me a two cent stamp and I will tell them how, but at present I will not tell them how to make money in growing alfalfa. Must learn that myself first. At present I am only giving methods and results. GEORGE M. CLARK.

Higganum, Ct.

GREENWOOD FARM.

Editor Southern Planter:

After attending the interesting meeting of the Farmers' Institute at Roanoke, I want to give my experience on a neglected Virginia farm, of which we took possession five years ago. We bought the farm, teams, implements and crops from the owner. We first put all the corn stubble into wheat and oats, and in spring harrowed and sowed with clover, and where the land was light rolled it. Through the winter we plowed as much as we could of the sod and weedy ground for corn, and when we had worked the corn the last time we followed with a one-horse pea drill and sowed from two to three pecks of black peas to the acre. These make a good growth generally to turn under for fall grain. The peas ought to be sowed by July 1st, or sooner. We use all the straw for bedding, and the corn for fattening steers. We make all the manure we can, and put it on the sod for corn. The corn land we cannot manure we sow in crimson clover when we give the corn the last working, and the following spring use it for sheep pasture, and then put it in peas. These peas we cut and thrash for seed, and the land we put in fall grain and seed to clover and timothy. We plow deep for corn and carry a grubbing hoe on each plow to dig up all brushes and stumps. By this method of farming we made in 1902 and 1903 fifty bushels of corn to the acre, and this year (1904) sixty-two and one-third bushels. Fall seeded oats averaged over fifty-four bushels per acre, and we made twenty bushels of wheat to the acre where we sowed in October, but November seeding was too late. Late seeding is apt to give small crops. We are now plowing the oat stubble for alfalfa and following with a Syracuse subsoiler. It takes four mules all they can do to pull it. We will use marl on the plowed land and mix it thoroughly with the soil. A good silo is needed on every stock farm. We have Shorthorn cattle, Angora goats and sheep. In trying to make a good farm I believe in good fences, good buildings, and all the good stock we have feed to keep well.

Henrico Co., Va.

I. S. EBERLY.

EXPERIMENTS WITH ALFALFA IN NORTH CAROLINA.

Editor Southern Planter:

In the spring of 1892 I made my first experiment by sowing a small plat of dark gravelly soil in alfalfa with spring oats, and succeeded in getting a very good stand. I clipped it twice that year, and during the next season (1893) it produced three good crops,

but in August the leaves turned yellow and it was evident that something was wrong. In May of 1894, I cut one fairly good crop as to growth; but much of the stand having died out and become thin during the previous fall and winter, I plowed it up. In September of that year I again seeded the same plat of ground, but the result was not satisfactory. Upon examination I found that underlying this land about eighteen or twenty inches from the surface, there was a bed of soft, half-decomposed granite rock, which prevented drainage and the roots of the alfalfa from going down.

In November, 1899, I purchased the farm where I now live, containing 42 acres, on twenty acres of which the original soil was a dark chocolate, with a good stiff red clay subsoil. This land had been in cultivation for some twenty or twenty-five years and was exhausted, washed and worn so that very little of the native soil remained. It is situated on a high ridge that is of a dry and thirsty nature. I selected an acre and one quarter, and commenced to prepare it for alfalfa during the early part of the year 1900 by plowing deep and subsoiling well to break up the hard pan and clay. I manured with stable manure and seeded it to wheat in the fall. When the wheat was harvested in 1901, the ground was prepared and sowed in Clay peas. This rotation was repeated again next year. In October, 1902, I again sowed it in wheat, and in March, 1903, after harrowing well both ways, sowed thirty pounds of alfalfa seed and secured a splendid stand, but in a short while after the wheat was cut the young, tender and delicate alfalfa plants disappeared. Seeing that it would not do to seed with a "nurse crop" in this climate, I again set to work in November, 1903, to thoroughly prepare the same land for alfalfa. During the winter it was given a good coat of stable manure, and in March, 1904, I again plowed deep, using a two-horse subsoil plow in the furrow after the turn plow. I put on one ton of Lee's Prepared Lime and disked until the land was a perfect seed bed. Six hundred pounds of bone meal and thirty pounds of alfalfa seed were put in with a drill, and then the land was harrowed with a fine tooth smoothing harrow and rolled. The seed came up even and thick, making a good stand. About the last of May I noticed that the plants were turning yellow. Believing that it needed inoculation, I ordered 400 pounds of soil taken from a field that had been in alfalfa for fifteen years. This soil was applied to a small portion of the square at the rate of 100 pounds per acre, and the rest at the rate of 300 pounds per acre. After three weeks, the yellow leaves disappeared where the

heavier application was made, but on the other portion there were yellow spots that remained, and now scarcely any plants of alfalfa are alive where these spots were, and consequently there is not more than two-thirds of a stand on this end of the plat. Some two months after applying the inoculating soil, upon examination, I found nodules on the roots of the plants.

It was clipped three times the first season, leaving the clippings on the land as a mulch.

Last winter stable manure was applied as a top dressing. The first cutting was made May 15th, when it was about one-half in bloom. The yield was about three tons of good, well cured hay without damage by rain. A friend called to see it after it was put in the mow, and said as he came out of the barn: "I have never before been in a barn with such a delightful odor."

The second crop was cut on June 16th, when about one-third of the bloom had appeared. The yield was something over two tons. After this cutting the hot, dry weather checked the growth, but the rich, dark green color remained, and since the rain, which fell about the 10th of July, the growth has been rapid, but as the bloom is appearing, it will have to be cut very shortly.

In the "school of experience" I have gained much valuable information in regard to alfalfa, which has many virtues and desirable qualities to commend it to the farmer. That it can be successfully grown in this section of the country, I feel assured, but the land must be rich naturally, or made so, plowed deep and well prepared, limed, inoculated, and seeded with the best of clean seed.

If we would cultivate less tobacco, cotton and corn, which require manual labor and exhaust the land, and let alfalfa, clovers and grasses, that require less plowing and planting, and can be produced with less manual labor by means of improved machinery take their places, the results would be far more profitable and satisfactory. If the farmer would give the same careful thought, energy and attention to farming that the merchant does to his business; invest the same capital and apply the same principles, farming would be a success and pay a better per cent. upon the capital invested. Let the farmer take the same care and pride that the business man living in the city does as to a comfortable home and attractive surroundings, then the oft-repeated query, "How to keep the boys on the farm?" would, in my judgment, be successfully answered.

SAMUEL L. TROGDEN.

Guilford Co., N. C.

THE COTTON GROWER AND THE FERTILIZER TRADE.

Editor Southern Planter:

It is probably true that the cotton growers of the United States use the larger part of the commercial fertilizer manufactured in this country. Cotton is a "special crop." It is the money crop of the South, and therefore the crop that the farmer feels that he must feed well and with a generous hand. This is indeed reasonable, if feeding well means feeding rationally. As a matter of fact, the average upland cotton field of the South is almost totally devoid of humus. It is naturally lean soil—that is to say, it is of a sandy nature—containing very little lime. It has for some hundred or more years been cultivated in cotton with little attempt to restore the ingredients of fertility sold off with the crop. Worse than this, the soil has been constantly abused by an improvident and wasteful class of tenants. Trying to secure maximum crops from such soil with commercial fertilizer is about as rational as trying to make a starved horse do good plowing for a week by feeding him for the time being upon canned groceries. To secure maximum crops from a worn cotton soil, the farmer must begin at least one year ahead. The first step in improving such a soil is to restore its natural proportion of humus, or rather to supply as much vegetable matter as the soil will take without becoming sour. The Southern farmer has no lack of crops from which to select a soil improver. For this purpose, however, we want only a leguminous crop, which will at one operation supply both humus and nitrogen. Let us suppose, our proposed cotton field is this season planted in corn. Very likely the crop has received a small dose of "guano" in drill, and will produce some ten or eleven bushels of corn per acre. The soil on testing with litmus paper will be found acid. It has for at least fifty years received annually a small dose of acid phosphate, but never a particle of lime. The residues of the excessive doses have left sulphuric acid in the soil. (More correctly stated, the original lime content of the soil has been reduced by part being taken up by the sulphuric acid eliminated from the acid phosphate by the growing crop, and thus an acid condition of the soil has been produced. There is no free sulphuric acid in the soil.—Ed.) We must first broadcast upon the land and plow in, while cultivating the corn at least 600 pounds per acre of air-slaked lime. At last cultivation of the corn let us apply the following mixture per acre:

Muriate of potash.....	50 pounds
Acid phosphate	250 pounds

In September let us drill in per acre 20 pounds of crimson clover, or 45 pounds of Scotch or sand vetches. If either of these crops have not recently been grown upon this field, it will be well to secure about 100 pounds of surface soil from fields which have grown the selected crops for some years, and use this to inoculate our corn field. We may sow the inoculating soil broadcast, but a better way will be to use it to make a wash, and in this wash soak our seed a few hours before sowing. We will be pretty certain to secure a good stand of clover or vetch. If in need of forage during the winter, we may graze our field from Christmas to March 1st. We will then let it grow until April 15th and plow under. We have now a fair basis to start upon in our intensive use of fertilizer. We will follow the usual custom and put the fertilizer all in drill under the seed. We use per acre the following home mixture:

Acid phosphate.....	450 pounds.
Muriate of potash.....	75 pounds.
Cotton seed meal.....	150 pounds.
Nitrate of soda.....	25 pounds.

With good care and average season, our crop will not fall below 500 pounds of lint per acre, as against 100 without fertilizer. Our fertilizer cost us about \$6. The value of the increase at 7 cents per pound is \$28. This is not merely a theoretical calculation. It has been done by ordinary or average farmers, or men who differ from the irrational user of ready made "guano" only by having a little forethought and prudence.

We must once for all understand that starved and burnt out soils cannot be made to yield good or profitable crops of any kind so long as they remain in that condition. Therefore we must first feed up the soil, and, having restored its strength, we may then feed the crop as much as it will assimilate. Just where the boundary of economical fertilization will be found, depends largely upon local considerations, which each farmer must work out for each field. This boundary is further off than many suppose.

GERALD MCCARTHY.

Biologist, Department of Agriculture, N. C.

CLOVERS AND LEGUMES.

(Continued.)

Editor Southern Planter:

Now let us leave the common red clover and go on along the list. Not that the subject is very thoroughly gone over, but there is much to consider yet, and time is pressing. Let us consider the Mammoth

clover. This is truly the medium clover. Do not call the common clover medium clover, for the name by rights belongs to Mammoth clover, and has for many years.

Mammoth clover does not make very good hay, as the stems are too coarse and woody. It is excellent for pasture. While not generally known, this clover may be seen growing wild in pastures and along roadsides and in old meadows. It blooms much later than common red clover. It is a perennial, yet a field of it may grow so rank as to kill itself out almost entirely by falling over and making too dense a mulch.

It should be sown in all grass mixtures or permanent pastures. It is profitable to grow for seed; for this purpose it should be mown very early or else be heavily pastured in the spring. This clover hybridizes very easily with common red clover, and almost any intermediate form may be found, a fact not generally known.

Before leaving these two clovers, I will say that their length of life may be much prolonged by not allowing them to mature seed. When that is accomplished their mission is generally ended, and they soon die. Common red clover is called a biennial. It is not strictly so. Sometimes it matures seed the first year and dies. Again, and more commonly, it matures seed and dies the second year. It is sometimes a perennial. Much can, and no doubt will, be done some day to improve the varieties of red clover by selection of seed from the most vigorous and hardy plants. There are numberless varieties in size of leaf and flower, time of blooming, color of flower, etc. One day we will recognize the type we want and breed to it.

I will not speak of alsike clover to-day. I do not consider it of very great value for our farming here. Some of you have read of Sainfoin or Esparcette, a legume that has revolutionized the agriculture of parts of France, England and Switzerland. It does not seem to thrive here. I have tried it at Woodside Farm, and at the ranch in Utah, with no results worth speaking of.

CRIMSON CLOVER.

There is no plant toward which more eyes are turned with expectancy than crimson clover. I own, I think, it will entirely change our system of farming at Woodside Farm. It means, if it can be successfully grown, the elimination of the wheat crop from our rotation.

Crimson clover is a native of Southern Europe. It has been long cultivated in France, Germany, and England. It is an annual plant. Its natural time of starting is after the seed has ripened and fallen, which occurs about July 1st. From then on until September or October, if the seed is sown and it has a little moisture, it will grow and make a sturdy

young plant, with a good root and close lying leaves, ready for winter.

It endures cold better than red clover. I have noticed that the leaves will stand almost zero weather before turning brown. It has not much tendency to heave out of the ground; not as much as red clover. Its roots are more branched and fibrous than those of red clover. They do not penetrate quite so deeply.

In spring, as soon as the weather warms up a little, it begins to grow and it grows much more rapidly than red clover. By the middle of May it is in full bloom. It should be cut for seed by the 5th of June, or perhaps earlier. After the seed is perfected it dies, root and branch. There is no second crop. It has enriched the soil very greatly, even during this brief time. To get the greatest benefit from it it should be mown for hay about the middle of May, or fed off green, and the land plowed and planted to corn or rape or late potatoes, perhaps.

Then along in late July or August the seed may be sown again at the last cultivation of the corn. There is great gain in having the land covered with a growing crop all of the year. There is much less loss of fertility from washing or leaching. There is no plant that fits in so well to serve this purpose as crimson clover. I do not think we will have any difficulty in growing this clover except the one of getting it started in the fall. Our falls are often so droughty. It is well to cover the seed slightly. It is useful to roll the ground after sowing, when this can be done.

I do not think it will succeed when sown in the spring. I have tried a little of it once, with no good results. Its natural time of starting is in the fall. It cannot be sown with grain. It would be ripe, seed and all, and gone before the grain was ready to cut. Crimson clover produces abundantly of seed, much more than red clover. The seed is larger than red clover. It is not hardy when European grown. So much is grown in America now that there is little danger of buying any foreign seed. Most of the former experiments resulting in failure were made with imported seed. There are numberless varieties of this plant as of red clover and by cultivating it in our severer climate the weaker plants die and the hardy ones survive. By this rough but sure way of selection the tender plants were eliminated and the hardy ones have survived.

Crimson clover is an old plant, and has been long cultivated and much esteemed in England. It is there generally sown on wheat stubble and followed by turnips. Crimson clover may well be sown with timothy grass in the fall. It should then be cut for feed as hay the next spring, and will leave the timothy pure and "straight," as the hay dealers say.

Now, as to benefits to be derived from it, an experiment in New Jersey was most interesting. On

one acre of corn stubble crimson clover seed, costing one dollar, was sown. An adjoining acre of precisely similar land, as near as could be secured, was left bare. The clover was cut for hay, and the land planted to corn, with no manure or fertilizer other than the clover stubble and roots. The adjoining acre had fertilizer applied, costing \$25. I believe it was what is called a complete fertilizer, specially adapted to corn. Cultivation was as near alike as possible on both acres. When the crop was harvested the acre that had grown the crimson clover produced considerably the larger crop.

I honestly advise every farmer to experiment on his own farm with a small plat of this clover this year. For myself I will say that if the ten acres we have now sown does as well as we hope it will do, we shall sow forty acres next July or August at the time of the last cultivation of our corn. The ladies will be pleased to know that the blossom of the crimson clover is very beautiful indeed.

Some skeptics have asked me, If crimson clover is so good a thing, why is it that we have not had it before?

I answer, when wheat payed to produce we had no great need of crimson clover for our rotation could well be corn, wheat, clover. Now I am anxiously looking for some practical way of leaving wheat out of the rotation, and I know thousands of other farmers are thinking the same way.

We must use a rotation that has a legume in it in order to keep up fertility. Even then I am sure we should carefully save and apply all the manure made on the farm. Can I farm with corn and crimson clover and manure? If so, my land is nearly doubled in value to me. I am exceedingly desirous that I may learn to make it a success. J. E. W.

The value of the crimson clover crop is now so thoroughly established in Eastern and Middle Virginia that it has come to be one of our staple crops. The area over which it can be successfully grown in the South is immense, and it is destined in connection with the cow pea—the one grown in the winter and the other in the summer—to redeem millions of acres of now unproductive land and make them produce profitable crops. There is yet time to sow crimson clover this year. It usually does well sown in September. Apply 20 or 25 bushels of lime to the acre, so as to correct any acidity in the land, and where clover has not been previously grown inoculate the seed with bacteria to be had from the Virginia Experiment Station, and sow 15 or 20 pounds of seed per acre. When sown with half or three-quarters of a bushel of mixed grain (oats, wheat and rye).—of a bushel of mixed grain (oats, wheat and rye). Sow 10 to 15 pounds of clover seed per acre.—Ed.

THE SILO IN THE SOUTH.

Editor Southern Planter:

The South, as a general rule, is not a grazing section of the United States. In a few of the valleys, however, between the mountain ranges, in Virginia and elsewhere in the South, are found sections where there is very good grazing indeed; but these sections are comparatively few and far between.

The greater portion of the South is not naturally adapted to the grazing of stock. Therefore if stock is kept in quantity in the South, it must be kept on the intensive, rather than on the extensive, plan. Instead of allowing a cow or steer to graze over a large area of indifferent pasturage, the feed must be grown and either fed green to said stock or stored in silos for later use.

We do not recall at present any definite data showing the acreage required for grazing an able bodied steer so that it will be fitted for market; but we feel quite confident that the average run of Southern pasturage will not carry more than one head of stock to five acres of pasturage. This being the case, we question if it pays to pasture stock.

One acre in silage, properly handled and stored, will carry five times the amount of stock through the year that can be carried on one acre in pasturage. By a judicious use of the silo, with good silage, supplemented with a small grain ration, so as to make a balanced feed, stock will fatten more rapidly, more profitably, and, generally speaking, of better quality. The value of the manure from silo fed stock is also an important item.

Twenty tons of silage corn may be grown to the acre, and even as high as twenty-five tons have been reported. The most satisfactory results from silage, however, seems to have been from a mixture of corn and soy beans grown together in alternate rows.

The rows were 42 inches apart, and the field was planted, two rows of corn, and then one row of soy beans. This gave the corn more air and sun and a better growth than if the entire field had been planted to corn. This also gave more protein in the feed than if only corn was used.

The question of how thick to plant the corn in the row is an unsettled one. The gentlemen having the most experience here rather favor planting quite thick; but it seems to me that drilling the corn so that the stalks would stand from six to ten inches apart in the row would be more desirable than to plant thicker. If bulk is all that is required, perhaps there is more bulk in thick planting than in thin; but if sugar is wanted, it may be had in greater quantities in the thinly planted corn.

The gentlemen whose experience we are noting built their own silo, with the help of a plain carpenter—we mean a carpenter without frills and without experience as a silo builder—and built the circular silo, at a cost of \$1 per ton capacity. It is surely reasonably certain that a silo, fairly well cared for, will last at least ten years, so this makes it cost, in round numbers to store silage, just ten cents per ton.

It will puzzle the farmer to store any other fodder tonnage on the farm equally as cheap. The cost to grow silage is well within the fifty cents per ton mark, provided the soil be in good productive condition.

The cost to cut in the field, convey to the silage cutter, and put into the silo, is hard to get at accurately; but surely need not and should not be more than 75 cents per ton—in fact, it ought not to cost more to fill the silo than to grow the crop.

The minimum cost of silage may be set down as \$1 per ton and ten cents per ton cost to store it. This makes the cost of silage \$1.10 per ton under favorable conditions. This is for corn silage. If the soy bean is used in every third row, the tonnage may be off a little, although not much, because the two rows of corn will be almost as good as three would be if the beans were left out. But we will suppose that the cost of mixed silage be even as much as \$1.50 per ton, it is still by all odds the cheapest way to store feed on the farm.

The silo will double the capacity of every farm to carry stock. It will supply the farmer with a large quantity of the finest and best of manure. It will soon double the productiveness of every acre of ground utilized for silage purposes. It will enable the farmers near to our cities to buy and feed stockers. Corn silage and silage from soy beans mixed in the right proportions will come pretty near making a balanced ration, without the use of linseed or cotton seed meal; but if it should be best to feed a little of such feed, every farmer knows that the value of such feed behind the cow is almost up to its value in the manger. The farmer can practically “eat his cake and keep it, too.” He can feed his stock such concentrated food in the manger, in connection with silage, and almost get it back again in the manure; from manger to manure it loses less than one-fourth its value.

Stockers can be bought here, near Norfolk, for two cents per pound, often for much less, and a ninety day sojourn at the big silo near by puts on lots of weight and doubles the price per pound. Rightly and intelligently handled and vigorously

managed, I believe there is more money in feeding silage to beef stock here, or in feeding it to milk cows, than there is where cattle are grazed half the year, especially where the grazing lands are worth \$25 or more dollars per acre.

Milk here being ten cents per quart, a nicely balanced milk ration can be stored in the silo which will enable the milk man to make good profit. There is more money in feeding silage for ten cent milk than for four to five cent beef. But we believe there is more money in the silo here than in the \$25 per acre up grazing lands of the country, no matter how good those lands may be nor how well located nor how long the grazing season is.

The entire South, or at least all the smoother portions of it, is surely coming to “intensive” cultivation. It is coming to the same conditions as regards cropping and tillage as the sunnier and more prosperous portion of Europe. The South is to become the most densely populated portion of the United States. It is to be the best cultivated. The silo is destined to become a very important factor in the development of the South along agricultural lines. Moral: build a silo, and do it now.

Norfolk, Va.

A. JEFFERS.

TURKEY RAISING.

Editor Southern Planter:

In your July issue you ask your readers to give you their experience in raising turkeys. I do not raise them on a large scale, but am absolutely successful, rarely ever losing a turkey. Our neighbors are so close that I set the eggs under a chicken hen, as the young chicks will not then wander so far. I always keep them in dry coops at night on plank floors, and keep them free from vermin. Feed them three times a day on curds, which I prepare by putting clabber in a bag and hanging to drip until dry. They soon love this so much they refuse all other food. Then, Mr. Editor, I let them go. I do not run after them when it rains, nor at any time. Turn them out early and they come home themselves. I enjoy your magazine so much. Wish all the farmers would take your advice.

M. K. LAWRENCE.

Goochland Co., Va.

Goats will do well with all kinds of stock but hogs. They will not eat anything that the hogs have touched. No stock objects to goats, and cattle will feed after them and do well; also horses.

Some writers claim that 30 Angora goats will clear as much land in a year as a man with a mattock. No sprouts on land cleared with Angora goats.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The gathering and shipping and storing of apples and late pears and of the fall crops of Irish potatoes, sweet potatoes and peanuts will call for attention as these several crops mature. Do not allow the fruit or roots to remain ungathered long after they are ripe and matured. They never ship or store so well as when gathered just at maturity. Do not pick or dig the crops when wet. The soil should be, if possible, so dry when root crops are dug as to leave them clean when thrown out of the soil. Let both fruit and roots be carefully sorted and culled as picked and dug. This work of sorting and culling can never be so well done as when done at the time of picking and digging, and it has this further advantage in being then done that you know at once what quantity of marketable produce you have on hand. Apples are likely to be in strong demand, as the crop throughout the country is a very poor one. Virginia has probably the best apple crop of any State. Do not be in too great a hurry to sell. Let the fruit be put up in small piles in a well ventilated dry place, and then after it has passed through the sweat put up in barrels, packing them well, and store in a dry place, where they will be protected from frost until sold. Those intended for home use keep best stored in ventilated bins or on slatted shelves not in too great bulk in each bin or on each shelf. Irish potatoes keep best stored in a dry cellar after they have passed through the sweat and covered all round with a few inches of straw sufficient to keep out frost, or they may be made into pies or kilns of about 50 bushels in each pie or kiln outdoors. These pies or kilns should be well covered with straw, and with soil beaten solid and run up to a point. Put on sufficient soil to keep out the frost. Sweet potatoes require to be kept in a cellar where the temperature will not go much below 50 degrees, and they should be dried off at a higher temperature than this when first stored. They may be kept in a cellar, from which all frost can be excluded if packed in dry sand or pine tags after they have been thoroughly dried off before being stored.

Prepare the land for and sow kale and winter spinach. Do not make the land over rich for these crops, or they will make too tender a growth to stand the winter. Yet they need the soil to be sufficiently rich to keep them growing during the cold weather, so that they may be ready for shipping to the early spring market. If any fertilizer is needed, use acid phosphate and potash, with a small percentage of nitrogen.

The plants for the fall crop of cabbages and broccoli should now be set out in rich, well prepared land. Apply plenty of good farm-yard manure and phosphate and potash in preparing the land, and after the plants have started to grow give them a dressing of 150 pounds of nitrate of soda per acre and keep them frequently cultivated, so as to force the growth and have them heading and flowering by November.

The seed for the winter crop of cabbages should be sown during this month, so as to have the plants ready for setting out in November. The Early Jersey Wakefield is the best variety to sow.

Clean up all trash, vines, and waste products and burn or compost them with freshly made farm-yard manure, so as to destroy weeds and fungous spores.

Seed may be sown towards the end of the month in beds in sheltered situations of the varieties of onions to be raised from seed. Southport White Globe, Pearl, Yellow Danvers and Red Wethersfield are good varieties. The plants do not require to be pushed fast, but simply to be kept growing slowly, so that by February they may be about the size of a small pencil and they are then to be planted out to grow and mature.

Lettuce seed should be sown in beds to raise plants for the frames for cutting during the winter months and for setting out in the open ground for early spring lettuce. The seed beds should be where the plants can be protected with mats or bushes during the hard weather of the winter.

Strawberry plants may be set out this month. Prepare the land deeply and finely, and make it fairly rich with well rotted farm-yard manure, which has heated sufficiently to destroy all weed seed, and supplement this with 300 pounds of acid phosphate, 300 pounds of cotton seed meal and 100 pounds of muriate of potash per acre. Set the plants in rows eighteen inches apart and fifteen inches apart in the rows. Make the holes for the plants large enough so that the roots can be well spread out and press the soil firmly to the plants, leaving the crowns of the plants just above the level of the soil.

Potato onion sets should be planted this month. Put in rows two feet apart and six or eight inches apart in the row. Let the land be well prepared and fairly rich.

Live Stock and Dairy.

PREPARATION FOR THE LAMB CROP.

It is time to make preparation for next year's lamb crop. If you have not a good, healthy, vigorous buck, or if the one you have is akin to the ewes or ewe lambs to be served, look out for a buck at once. Do not wait until all the best have been sold and then have to take a lamb or a poorly developed yearling or two year old. The buck is half the flock, and it is a wise expenditure of money to buy a good one that will serve your ewes for a couple of years at least. When bought see that he has good care and is got into fine, vigorous condition before he is turned with the ewes. Put him on to a good clover pasture and feed him some grain every day, say a pint of oats and peas mixed in equal parts. A good buck will serve 50 or 60 ewes, but should not be required to serve more than this number. Do not let him run with the ewes all the time but leave him with them at night and take him away during the day. Have his breast rubbed with red chalk so that you can see which ewes he has served, and make a note of these so that you may know when to expect lambs. The ewes should be put into a good pasture and be given a little grain, oats and peas mixed, every day. This will soon bring them into use and ensure early lambs, and these are the ones that make the money.

SHIPPING CREAM.

In our last issue, replying to an enquirer who doubted the possibility of shipping cream any considerable distance without the use of special refrigerator cars, etc., we pointed out that cream had been successfully shipped from Blacksburg, Va., to New Orleans. Since writing that reply we have learned that cream is being shipped regularly from Chattanooga, Tenn., to Norfolk, Va., a distance, we should estimate, at something over 600 miles. Strange that the farmers of our own State are not able to supply its people with dairy products; butter is supplied by tons every year to Virginia tables by New York and Illinois, and now cream by Tennessee!

THE YORKSHIRE HOG.

In our last issue we published an article on this hog. Since that time we have come across the following item of news about the breed which will emphasize its good qualities, as there set forth: Thos. H. Campbell, of Minnesota, has this year 501

pigs from 47 Yorkshire sows. Surely this is a record in breeding.

SHEEP PRICES IN ENGLAND.

Sheep are soaring in price here, but they have a long way to go to reach some English prices recently made. Mr. Dudding, the celebrated English Lincoln breeder at his recent buck sale sold one buck for \$2,600, and another for \$2,000. He made an average of nearly \$500 per head for the whole flock (31). The first prize yearling Lincoln buck at the Royal Show, London, sold for \$5,000, and the first prize pen of yearling bucks sold for \$7,500. These high priced animals were bought to go to Argentina, South America.

SHEEP HUSBANDRY IN VIRGINIA.

At the recent Farmers' Institute at Roanoke it was our privilege to be permitted to address the highly intelligent and numerous gathering of our farmers on the subject of sheep husbandry. We emphasized the point that in this country, and especially in the South, sheep had been persistently neglected, and that instead of having at the least over 100,000,000 sheep, we had only about 45,000,000, and that Virginia had not yet reached the 500,000 mark, whilst the British Islands, only about as large again as Virginia, had 30,000,000 sheep. The whole Southland carries about six head of sheep to the square mile, whilst England alone carries 320 to the square mile, and Scotland 230 per square mile. We pointed out that sheep were at all times profitable, and that now they were in demand in excess of the supply all over the country, and that this condition was likely to continue and increase in force. Mutton is daily growing in popularity and demand, whilst we do not produce more than one-third of the wool which our mills manufacture. As emphasizing our remarks and showing the profit to be made from keeping sheep, we reproduce part of an address made by Mr. J. E. Wing before the Ontario Agricultural and Experimental Union last winter:

I said to myself: "Those old cattle we are feeding out in the woods are well enough so far as they go, but it is a poor speculation, as the manure is wasted in the woods and the cattle are too old when we buy them; what else can I feed?" I felt that it would be of much greater advantage to feed babies; they would give much better returns in the way of growth

for what they ate. At last I concluded to raise lambs; I could feed them in the barn, and sell them before they were a year old; so I borrowed money and purchased a carload of 250. After keeping out some for breeders, I fed 175 the first winter. Then I went to one of the most skilful men in the business and learned his methods. When he talked of the necessity for feeding the lambs protein, I became a little scared. What was protein? We did not grow it in our country. However, finally I understood what he meant, and I bought food containing protein, and fed the lambs carefully according to his directions. When spring came, I sold them at a clear profit of \$115. Then I saw daylight. I said: "This is a good proposition; if I can make \$115 on 175 lambs it is only a question of having enough lambs"; and I whispered to myself: "Some day I will feed 1,000 lambs on this farm."

It was only a question of having enough lambs, I concluded, and built more sheds. Then I found that I could not always buy protein, but that I should have to produce it on the farm. Wheat bran and oil meal did well enough to be sure, but they kept continually going up and up, and the price of the lambs down and down. Finally I learned to grow alfalfa.

At that time my brother came home from the ranch and joined me in the business, and we became ambitious and borrowed money, and laid drains, as the land had to be drained for alfalfa. Finally we had eighteen miles of drains, and had built barns to put the lambs in; and the long and short of it was that we got heavily in debt. This fact did not trouble me in the daytime; but when I woke up at 2 o'clock in the morning and began to think things over, it was a different story. That is the unhandiest time in the world to wake up if you have a heavy debt over you, or if you have been doing something you do not intend to tell your wife about.

But the productiveness of the farm was going up as well as the debt, and we reasoned it out that the farm would pay it all. We made some bad mistakes, but we learned how at last, and the time came when it was only a question of one good year, and that year we fed 1,200 lambs, as near alike as peas, from the products of the farm, with the addition of a little corn, which we purchased. We sent them to Buffalo, where men were looking for our lambs every year, and wanted them and paid the top of the market for them. When the cheque came back, I went to the bank with it; I did not owe a cent in the world except to the banker. He was a good friend of mine and used to come out to the farm once in a while to see how things looked; but I dare say he had an eye to business at the same time, and wanted to see how we were getting along. When I laid the cheque down, I said: "Tell me how we stand? Can I have the note now?" He said, "Yes," and handed

it out to me. I said: "Tell me what I have left." He figured for a few minutes and then handed me back my bank book, with \$880 on the right side of the ledger. I did not stop in town a minute after that, but went straight home and told my wife. When I reached home she was standing in the doorway and read the news in my face; and I do not need to tell you that it was the happiest day in my life. On figuring it out, we found we had made a clear profit that year of \$2,500, and that on a farm that had yielded only \$700 eight years before.

Just to give you an idea of what that farm now produces, I may say that this year we cut 350 tons of alfalfa hay and husked 3,000 bushels of corn, and had 2,000 bushels of grain. Of course, we have added some land to the original farm, but the farm paid for it.

TEXAS FEVER IN CATTLE.

Within the past few weeks we have had reported to us serious losses of cattle in this State from Texas fever. We, therefore, deem it of importance to bring to the notice of our subscribers the means for preventing these losses as recently worked out, and promulgated by Prof. Morgan, now of the Tennessee Experiment Station, but formerly of the Louisiana Station. As there is no cure for the fever when once cattle are attacked, it is of the highest importance that every stock keeper should know how to prevent the fever and use the proper precautions. If farmers will only act upon the advice given in the following extract from the bulletin issued and will insist upon a "no fence law," Texas fever can be driven out of this State.

Experiments conducted in Louisiana and other States suggest the following conclusions upon the fever side of the cattle tick situation:

1. The cattle tick (*Boophilus annulatus*) is the only species in the United States capable of conveying the Texas fever germ from one animal to another (cattle).

2. The degree of virulence of the fever germ transmitted by individual ticks depends to a very great extent upon the susceptibility of the animals upon which the immediate progenitors of these ticks were developed. Hence an animal recently immunized by blood inoculation will suffer less from fever tick fever if pastured with a number of native cattle than if permitted to collect seed ticks, the immediate offspring of those developed upon this inoculated animal. The offspring of cattle ticks developed a few generations on horses and mules, in the blood of which the germ becomes innocuous, are non-transmitters of fever. These conditions, together with incorrect identifications, account for the belief of some stock owners that ticks do not transmit Texas fever.

3. It is possible to give a marked degree of im-

munity by hypodermic injections of fresh or defibrinated blood (1-5 c. c.) from a non-susceptible tick infested animal, or by gradual and limited artificial application of young ticks (seed ticks), the product of old ticks developed on animals which have had Texas fever either from inoculation or from tick infestation.

4. Young animals suffer less during immunization than older ones, unless changes in dentition disqualify them for the range, in which case judicious feeding must be resorted to. In fact, during the fever period (60 days) animals should be placed upon a nutritious, well balanced ration.

5. With higher-priced animals it is better to inoculate the calves at from six to nine months old than to permit promiscuous tick infestation, and consequent serious check in development, when a week or more old, as is the case with calves dropped upon infested pastures.

THE ERADICATION OF THE TICK BY A PASTURE ROTATION SYSTEM.

There are five species of ticks found upon cattle in the South which the stock raiser might experience some difficulty in differentiating: the North American Texas fever tick (*Boophilus annulatus*), the lone star tick (*Amblyomma americanum*), the dog tick (*Dermacentor lectus*), the net tick (*Dermacentor reticulatus*), and the castor bean tick (*Ixodes ricinus*). The first is the only one which should give the breeder any concern, but persons not familiar with the specific differences have confused the habits and development of the fever tick with those of the lone star, dog, and net ticks. While the habits (except in selection of hosts) and development of all these species are very similar up to the period of attachment to host animals in the seed tick condition of each, there is a very marked difference in habits and development of the fever tick and the three other species from the period just before the first molt to that of the fully mature and engorged female. The female tick remains upon its host throughout the molting periods up to engorgement, while the other species drop from their hosts just prior to each molt. The latter habit greatly prolongs the life cycles of the lone star, dog, and net ticks, even to as much as ten months or a year, and in consequence reduces the numbers to such an extent that they are not in any sense serious pests.

In the study of the development of the Texas fever tick during the summer months it was found that the time required for seed ticks after infesting animals to mature into engorged females and drop to the ground for egg deposition was a little less than the time required for a female after dropping to lay eggs and these eggs to hatch. Therefore infested animals might be cleaned of ticks by being placed in a tick-free field, upon which to drop all their ticks, before eggs from females dropped the day the ani-

mals were placed in the pasture would hatch. The time between the dropping of the ticks and possible reinfestation was of too short duration for this plan to be practicable in the face of slight developmental variations due to changes in temperature or other conditions. Experiments were conducted in order to determine if a wider range of time between these important suggestive remedial periods did not exist, and thus develop a remedy easily within the range of the average farm operations of the South. Continuing the breeding experiments through every month in the year it was found that eggs deposited the latter part of November and in December, January, and February did not hatch until late March, April or early May, and that the longest period of development of the tick (from seed tick to full engorgement and period of dropping) upon cattle during these months was 40 days, 35 being in most cases ample for the development and dropping of every tick. It thus became easily possible to place infested animals upon tick-free areas during late November, December and January, have them drop every tick and run no risk of reinfestation, as eggs did not hatch under the prevailing temperature of these months.

The next phase in the development of a practical remedy was the determining of the length of time necessary to starve ticks out of a pasture when all hosts (cattle, horses and mules) were excluded. Experiments during the summers of 1897 to 1904, inclusive, showed that about one month was necessary for the laying and hatching of eggs, and that seed ticks could endure as long as two months in summer without food. For example, if all hosts of the cattle tick were removed from a pasture on June 1st this pasture would be tick-free by early October.

The fall and winter months, though a decidedly opportune period for ridding animals of ticks, were found least effective as a period for cleaning pastures by excluding cattle tick hosts. Eggs deposited in the late fall may not hatch until the next March or April, and seed ticks may live without food from late September until the middle of the following April. It will thus be seen that more time is required during the late fall and winter months to deposit and hatch tick eggs or to starve out seed ticks than is necessary during mid-summer to effect both operations.

With this information a remedial application may be perfected to meet the conditions upon the farms or plantations of the South. Pastures may be divided so that from a portion of them all animals (cattle, horses and mules) upon which the Texas fever cattle tick develops, may be excluded from June 1st until late fall in order that the animals when cleaned of ticks may have a tick-free field in which to be placed. To be cleaned the animals may be placed, not earlier than the middle of November, in a corn or cotton field from which the crop has been

removed, and there kept until the ticks have dropped (35 or 40 days). In no case should they have access to the pasture from which they have just been taken, as animals may become infested during a warm spell of the winter months with seed ticks which hatched in September or early October. (Seed ticks hatched September 29, 1903, remained alive without food until April 10, 1904.) As soon as all ticks are dropped the animals may be removed to the tick-free field, or they may remain longer without danger of reinfestation if the corn or cotton field provides sufficient pasture. Not later than February they should be placed in the tick-free field to be fed the hay crop gotten from this area the previous season. Upon this tick-free area they may be kept until sufficient time has elapsed to destroy the ticks by starvation in the pasture from which they were removed into the corn or cotton field the fall previous.

It should be remembered that not all farms nor all fields of individual farms lying below the national quarantine line are infested with the fever tick. Parishes of Louisiana devoted to sugar cane and rice culture are practically free from ticks. Many cotton plantations are also exempt, and those parts of all farms throughout the South upon which no cattle have been from June 1st until October 1st, or later, are also tick free.

These areas may be advantageously used in eradicating the fever tick from contiguous ones.

The "feed-lot" method of cleaning cattle is based upon the fact that the parasite (from attachment as seed tick to dropping to ground as a fully engorged female) of the fever tick is not more than 40 days; less in summer. In this method a portion of ground is set apart, half of which is of sufficient size to accommodate the number of cattle on hand. The area selected should be convenient to plenty of feed and water. Surround and divide the lot with a double fence (8 to 10 foot space). Feed the cattle for 20 days on one side, then remove them to the other for 15 or 20 days longer. Every tick will have dropped, and the cattle may then be placed upon such field or pasture as may be tick-free and available. By this method entire farms may be cleaned during a summer period of not exceeding four months. In the early spring select a field with water and shade available to be devoted to broadcast sorghum, corn, or millet, or all three. On June 1st fence off the feed lot (within the forage field), in which place all the cattle of the farm, and feed and rotate as described above for 40 days. At the end of this period the cattle may be turned into the field of sorghum, millet or corn, and there pastured until October 15 or November 1st, by which time all fever ticks upon the entire property outside of the feed lots will have perished.

After the animals are removed the feed lots should be immediately plowed and thoroughly cultivated,

and their edges completely sprayed with crude petroleum, zenoleum solutions, or other substances destructive to tick life.

THE VALUE OF DIFFERENT FORMS OF ROUGHNESS FOR BEEF MAKING.

Editor Southern Planter:

During the past winter an interesting experiment with 60 head of beef cattle was conducted at the Experiment Station. The 20 cattle fed silage made an average gain of 1.46 pounds per head per day; the 20 cattle fed timothy hay, 1.10 pounds per head per day; and the 20 cattle fed shredded corn stover, .97 pounds per head per day. There was thus a difference of one-third to one-half pound of gain per head per day in favor of the silage fed cattle. The silage fed cattle finished off the best and showed more quality than the others, and in any discriminating market would have brought a considerably higher price. The strong prejudice against using silage for the winter feeding of beef cattle is hard to understand, for it has been fully demonstrated that silage fed cattle will kill out quite as well as the dry fed cattle, and the meat is, generally speaking, of a superior quality. Whereas the silage was all eaten up, 13.5 of the stover and 4.16 per cent. of the hay was wasted. The gains show that the cattle fed were not of a satisfactory quality. In previous experiments a pound of gain has been made for a consumption of 3 to 4 pounds of grain. The silage fed cattle in this test consumed 6.54 pounds of grain for a pound of gain; the stover fed cattle 11.18 pounds, or about twice as much; and the hay fed cattle, 8.99 pounds, or 2.45 pounds more per head than the silage fed cattle. With better bred animals fed in previous experiments, the average gain per head per day has often been 2.18 pounds throughout the six months feeding period, which again testifies to the unsatisfactory quality of the animals fed in the test.

ANDREW M. SOULE, *Director.*

Experiment Station, Blacksburg, Va.

ANOTHER FINE VIRGINIA HERD OF JERSEYS AND BERKSHIRES.

Editor Southern Planter:

We recently referred at length to the additions made by Mr. A. M. Bowman, of Salem, to his herd of registered Jersey cattle, and in the August number we had a pleasing notice of Major Venable's herd at Farmville. There is another herd of pure bred Jerseys in Virginia which, in all essential respects, ranks up with the best herds in the country. It is owned by Mr. Carter Glass, Congressman from the Sixth Virginia District, and publisher of the Lynchburg *Daily News*. On his Montview Stock Farm, near

Lynchburg, Mr. Glass, by careful selection and patient breeding, has assembled as handsome and productive a herd of high class, registered Jerseys as may be seen anywhere. Until now Mr. Glass has never been willing to sell any of his stock, and has not, therefore, given publicity to his herd. However, from a few royally bred animals, purchased from noted breeders exclusively for family use, Mr. Glass, with such timely additions as were necessary to prevent unwise inbreeding, has built up a splendid herd of about sixty head, and will, henceforth, dispose of the increase from time to time.

The Montview herd is headed by two imported bulls, bred by Maret, of Grouville, and La Gallias, of St. Brelades, two famous Jerseymen. These bulls were imported by T. S. Cooper, and their sale recorded in *The Planter* for July, 1903. The principal herd bull is Maret's Flying Fox, sired by the celebrated Flying Fox, owned by Thos. W. Lawson, the Massachusetts millionaire, and regarded by many as the greatest Jersey bull ever brought to America. Mr. Glass's Flying Fox bull is full brother to Sam Loates, among the most famous prize winners of his age over Jersey, and pronounced by John A. Perree, Secretary of the Jersey Cattle Club of the Island of Jersey, "the handsomest bull the Island has produced for twenty years." He is out of Charley's Niece the cow that swept the Jersey championships over the Island for three successive years. The Maretts bred the great Golden Lad, and have taken more prizes with their cattle than any three Island breeders combined.

The other herd bull at Montview Stock Farm is Golden Peter, a very aristocratic sire, tracing twice to Golden Lad and Wolseley, and, on his dams' side, to the prepotent Tulip strain, with such cows as Sultanne, Sultana 9th, and Tulip 4th behind it. Tulip 4th gave 10,000 pounds of milk the first year she was in America, and tested 19 pounds and 8 ounces of butter in a week. The cows of this breeding brought high figures recently at Cooper's sale of imported stock.

Among Mr. Glass' young bulls, not yet in service, but held in reserve, is a beautiful son of Forfarshire, imp. (half brother to Flying Fox), and also a splendid young son of Flying Fox's Rex, imp.

Among the cows at Montview Farm are some of the greatest producers of the Jersey family. One of the foundation cows, Pride's Brunette, has in her the blood of Princess, the most famous Jersey cow that ever lived. Mr. Glass states that Pride's Brunette in full flow has "milked six and one-half gallons of milk in a day on ordinary feed and pasturage."

The St. Lambert wing of the Montview herd is not behind this Coomassie cow. In blood lines Mr. Glass' St. Lamberts are close up to old Exile, Ida's Rioter of St. Lambert, Stoke Pogis 3d, Canada's

John Bull, Allie of St. Lambert,, Ida Marigold, Matilda 4th, Niad of St. Lambert, and others of kindred type. Mr. Glass has not an animal in his herd that does not quickly trace to the famous sires and dams of the reigning Jersey families. Among the females are six granddaughters of Matina of Riverside, the great cow that made 27 pounds and 13 ounces of butter in seven days and milked nearly 8 gallons per day. These cows are likewise granddaughters of Stoke Pogis of Prospect, the St. Lambert bull that has begotten 60 tested daughters. Mr. Glass prizes beyond description his three young daughters of Forfarshire, one of the greatest bulls known to the Jersey breed.

Montview Stock Farm is also producing, and now for the first time offers for sale, some splendid specimens of thoroughbred Berkshires. The herd is headed by Montview Faithful, a vigorous son of Manor Faithful, sold at Biltmore in February, 1903, for \$615. George F. Weston, superintendent of the Biltmore Farms, writing of this sale to *The Planter* in March, 1903, said: "Probably the sensation of the sale was the boar, Manor Faithful, who, notwithstanding the fact that he was sold first of all, at a time when the bidding seldom commences at an auction, went for \$615. There was not another boar found in England combining so much quality and size without serious defect, with probably one exception, and he could not be guaranteed a breeder." Montview Faithful, by Manor Faithful, out of the great Highclere brood sow Princess Handley, is so near like his sire that Mr. Glass says in a letter to *The Planter*: "I would almost be willing to give this boar to any breeder who can match him in size, conformation and points with another boar of his age."

The Planter is glad to know that Virginians are more and more awakening to the desirability and practicability of stocking their farms with pure bred animals, and it hopes to see this State take a commanding position in this respect.

THE MILK OF HOLSTEIN COWS.

EXTRACT FROM ADDRESS OF A. A. CORTELYOU, PRESIDENT OF THE HOLSTEIN FRIESIAN ASSOCIATION, JUNE 7, 1905.

The most important work of a public nature which, in my opinion will operate to advance the interests of owners of Holstein cattle, is the promulgation of a better knowledge among consumers of milk, of the dietetic value of the grade of milk produced by Holstein cows. It is a well known fact that the offspring of those breeds of cattle whose milk is rich in butter fat are reared with the greatest difficulty. Such offspring appear to be deficient in vitality and especially subject to stomach and bowel troubles, which are fatal in many cases; and it is now being more generally recognized by physicians and con-

sumers that milk rich in butter fat is an improper food for young children and is deleterious in its effects and produces generally the same effects in human beings as in animals.

These results are now said by scientists to be due to several causes and primarily to the excess of fat in the milk, and in case of children particularly, are probably also due to the extraordinary character of the fat globules, which in these small breeds of cattle are extraordinarily large, and entirely unlike those in Holstein milk, which nearly corresponds with human milk in its solid contents.

It is also becoming widely recognized that the milk from the large and vigorous races of cattle, especially Holsteins, possesses another quality, characterized by Professor Carlyle as vitality, and that this quality is communicated to the consumer, whether man or beast. Thus we have large, strong, vigorous calves when reared upon Holstein milk, and puny, weak ones from those reared upon milk rich in fat; and human beings, fed upon milk possessing the characteristics of Holstein milk, are likewise healthy, strong and vigorous.

The investigations of the Storrs Connecticut Agricultural Experiment Station, as published in Bulletin No. 31, wholly confirm these assertions, and I commend this bulletin to you as worthy of most careful study.

Professor Carlyle was right in affirming that "there is such a thing as vitality in milk, and that it is of equal, if not greater, importance than its chemical composition, especially for the milk supply of cities, and there can be no question but that the vitality of milk is closely associated with the vitality of the animal producing it."

I will quote generally from the Storrs Bulletin: "In the country at large, the product of one cow in five is sold to be consumed as whole milk. It will not be denied that milk varies in its food values and in its composition. The experiments were conducted for the purpose of showing the relative food value of solids from milk poor and rich in fat content when fed to young growing animals."

"For the first forty days the pair of pigs receiving skim milk gained sixty-two pounds; the pair receiving milk poor in fat 54.8 pounds, and the pair receiving milk rich in fat 42.2 pounds. For the next ten days the gain was for each pair, twenty-two pounds, twenty and one-half pounds, and three and one-half pounds, respectively. From fifty to sixty days the results were twenty pounds gain, twenty-one pounds gain and six pounds loss, respectively. After forty days of feeding the pair receiving the milk rich in fat were affected with loss of appetite and diarrhoea, and finally did not consume enough to sustain life."

And I wish here to interpolate that there can be little if any, doubt that the same effects are produced

on young children by the feeding of milk of certain breeds of cows, that is clamored for by a class of health officers in our cities and urged upon the parents, especially those who are able to afford a high priced product. Not unfrequently the milk of such cows is also dangerous from other causes.

To proceed with the quotation: "The pair receiving milk poor in fat content, as well as those receiving skim milk, maintained good appetites until the close of the trial."

"The failure of a pound of milk solids in rich milk to make equal or better gains than a pound of solids in the poor milk was not due apparently to lack of nitrogenous material, but rather to the excess of fat or to the character of the fat."

"Larger fat globules were found in the richer milk, and this fact, in connection with the digestive disturbances, would seem to indicate the reason for the larger gains from a pound of solids with the poorer milk."

"Fat globules in human milk are smaller than the fat globules in cows' milk. If it is safe to reason by analogy from the brute to the human, then whole milk containing a low per cent. of fat would seem to be better suited for infant feeding than whole milk high in per cent. of fat."

It seems to me that this closing paragraph is one to be taken to heart by every person.

PRODUCING HEALTHY PORK.

Editor Southern Planter:

It is an old saying that "the hoof of the sheep is golden," and though that it is a very wide statement, it does not adequately convey the true value of the hog to the American farmer, for this animal, after all, has been the real mortgage lifter, and has done more to free American farmers from debt than any other class of stock raised on the farm. The hog, however, has one serious drawback in that he is subject to disease from which other animals are free, so that even under excellent management the herd is liable to decimation every few years, with the result that what would otherwise be enormous profits are after all cut down to a modest percentage on the money invested. One of the great and vital questions, therefore, to every person interested in hog rearing is a discussion of how these animals may be kept healthy, for if they could be kept healthy and were as free from disease of a destructive nature as cattle, the profits from hogs in proportion to those now obtained would be vastly increased, and would be very much greater than is nominally obtained from cattle or sheep. The hog in a state of nature is comparatively free from disease, and one of the great mistakes that has been made is in placing him under too artificial conditions, confining him in narrow, cramped pens, and cutting off exercise, which has a ten-

dency to undermine the health and weaken the constitution. But more of this later on.

One of the first essentials to obtain a healthy, vigorous offspring is the necessity of having strong, active parentage, and if this is a hereditary trait intensified through several generations, so much the better. Not long ago the writer was visiting a farm, and was requested by the owner to examine the hogs thereon and give some estimates of the price of certain animals. This farmer had several very good brood sows, which were undoubtedly hardy and vigorous, as the large litters they had farrowed distinctly showed. The young pigs were also in excellent condition and growing rapidly. The farmer seemed to have a high appreciation of these brood sows, and said they were valuable animals, and that he disliked to part with any of them. It is true they were only grades, but nevertheless they were possessed of those qualities most valuable in the brood sow. Imagine what a surprise it was to see the male kept on this farm. He was a veritable scrub, long and lanky, and without any of the qualities one would seek in an animal, at least half of which are supposed to be transmitted to the offspring. This sire was narrow in the chest and tucked up in the quarter, and certainly did not show any evidence of being a healthy animal, possessed of a good constitution. The example quoted is too often met with and is one of the contributing causes to the outbreaks of hog cholera which frequently occur. It is of the utmost importance that the parents, both male and female, should possess every evidence of health, for they are bound to transmit their qualities to the offspring, and if naturally weak and lacking in constitution, disease will take hold of them easier and its ravages will be more complete.

The management of the parents is another matter of great concern. Too often they are confined in narrow lots, which prevents them taking the exercise necessary to the proper development of the lungs and all the other organs of the body. The hog naturally is of a roving disposition and if given his liberty he hunts around over the fields and through the forest growth gathering various leaves and herbs that suit his taste. At the same time he is taking exercise which is vital to his well-being, and if the breeding animals, whether pure bred or grade, were given more liberty they would keep in better health at all times, reproduce more freely, and the offspring would be hardier and possessed of better constitutions. It is often a wonder that hog cholera is not a more frequent visitor than proves to be the case, for the hog is frequently expected to live in a filthy, wet pen, cleaned out as a matter of convenience two or three times a year, and rarely, if ever, properly supplied with bedding, and never disinfected so as to ward off disease. This is an old, old story, and it is a condition too commonly met with, even in this enlightened

day when proper sanitation, for farm animals, is recognized as a matter of the utmost importance and one of the surest ways of keeping the animals healthy and preventing disease.

Another reason why hogs are so subject to attacks of cholera and other troubles is due to the fact that the males used at the head of grade herds are generally speaking purchased from men who are interested in producing pure bred hogs. These men often deem it advisable to keep their animals in show condition, so they will sell to better advantage. It is truly an interesting sight to visit one of these breeding establishments, where the animals are kept so fat they can scarcely walk, and are thus perfect models of what a hog should be. But it is needless to say that animals so fed and pampered from the time they are young, have their constitutions undermined, and have not that vigor and ability to throw off disease which animals allowed to rough it a little more possess. Of course, the man with grade hogs must expect to buy his sires from the breeder of pure bred animals, but it seems too bad that these men should persist in keeping their animals in such high condition and forcing them on such rich foods from the time they are farrowed until they are ready for service. Vigor in the sire is of the utmost importance, for after all he is much more than half the herd, and in choosing an animal it is well not to choose one that has been fitted for show purposes, or that has been pampered when young. There are some who will take exception to this statement and say that some of the greatest sires ever produced in this country were show animals and kept in the highest condition through several years of their lives. This is all true but at the same time these were exceptional animals; animals which naturally possessed marvellously good constitutions or they would never have been able to stand the strain to which they were subjected.

Weaning is a critical period in the life of the hog and the young pigs should receive the closest attention at that time, for if cut off from the mother's milk too suddenly they are certain to be stunted and so receive a set back, from which they may never recover, and even under favorable circumstances do not overcome it for a long time. Weaning would not be such a critical matter if more attention were given to teaching the young pigs to eat as soon as possible. If the sow is allowed to run at large the little ones will very soon learn to root in the ground and gather a certain part of their food, as it is a natural instinct for them to do so, but a large per cent of the hogs produced in the country are confined to pens at the time of farrowing and kept there certainly until after the weaning period. Unless some provision is made to teach the pigs to eat they are likely to depend largely on the mother for their nourishment, and then when the weaning period comes

their digestive tract has not been sufficiently developed to enable them to consume and assimilate as much food as is needed for their uniform growth. It is a mistake to confine sows to pens any more than is absolutely necessary. Of course, a warm, dry place should be provided for farrowing, and the little pigs must be protected from the snow and ice, but at other seasons of the year, and even in the winter, whenever possible, both the sow and the pigs will do better if they can take plenty of exercise.

Then, a separate trough should be provided in an adjacent pen to which the little pigs can find ready access, but from which the mother is effectually barred. There such supplemental foods as skim milk, middlings, wheat bran, and finely ground oats and barley, with a little corn and oil meal should be placed. If the grain feed is made into a thin slop, or if it can be mixed with a little skim milk, so much the better. The little fellows will soon learn to eat it, and this will help to develop their digestive organs and make them independent of the mother when the time for weaning comes. Under these conditions they are not likely to suffer a serious set back, and if they are then fed on protein foods they should grow uniformly. When separated from the dam they should be liberally fed and given all the exercise they will take. Large pastures are as essential on a good hog farm as on a cattle farm, but the truth of this statement is not generally recognized.

Experiments have been made to determine the relative value of feeding hogs in confinement, and where they have their liberty. It was thought for a long time that if they were shut up in close pens they would gain more rapidly. It now seems, however, that if moderate exercise is provided, they not only keep healthier, but their appetites are better, and they gain more rapidly than the closely confined hogs. There is also much less danger of disease under these conditions, which is a matter of the utmost importance. Good pasture and fresh air, besides being essential to the production of vigorous and healthy animals, provides a cheap means of maintaining the hogs through a good part of the year. In sections of the country where clover does well, and cow peas, soy beans, peanuts and other leguminous crops can be grown successfully, hogs can be grown to a good weight at the age of from 9 to 12 months with the consumption of only 10 or 12 bushels of corn; whereas they are frequently confined to pens and fed fully three times as much corn as is necessary. The cost of producing pork in one case, is, of course, much higher than in the other, and is, to say the least, not the best practice.

In winter feeding it may be argued that exercise cannot be provided. There is some truth in this, because the animals cannot be allowed to run out when the ground is too wet, but even then it is not necessary to confine them to close, wet pens, and if

they are confined, a platform raised above the ground should be provided and kept well bedded with straw for their comfort and protection. Animals kept in damp surroundings are likely to suffer from rheumatism and are often attacked with various forms of indigestion. When so confined during the winter they should be given a plentiful supply of mineral matter in the form of blood and bone, or a mixture of ashes, salt, copperas and a little lime or some charcoal made from burning corn cobs. The feed during the winter should be as varied as possible, unless the animals are to be fattened for immediate slaughter. Then, of course, heavy feeding may be followed for three months. Little success has ever been made in trying to feed hogs in the winter with any form of roughness other than grain.

For summer feeding, pastures arranged so as to provide a rotation are indispensable, as well as essential for making choice pork. The animals growing on pasture and taking plenty of exercise yield meat showing a better marbling of fat and lean than those confined in pens and fattened on corn alone. It is the exercise and the mast gathered in the forest that is chiefly valued by those interested in the production of Smithfield hams, and the reputation that this meat has made should be sufficient evidence of the importance of exercise and of a variety of food for the production of pork of the highest quality.

The making of so-called baby pork is now becoming an industry of great importance, and to secure the desired gain in the given time, the animals must be kept growing from the time of farrowing until slaughtered. For this purpose they must be fed nourishing and concentrated foods. If the farmer breeds his sows twice a year, he should certainly be able to work off one litter in the summer on grazing crops with a small consumption of grain. This will be the most economical method of handling the pork. In the winter time he will of necessity be obliged to feed a good deal more grain. If more attention be given to the general surroundings of the hog it will be kept in a better state of health and will make larger and more uniform gains, both in summer and winter, and there will be less complaint of the decimation of the herds through attacks of hog cholera.

ANDREW M. SOULE, *Dean and Director.*

Virginia Experiment Station.

CATARRHAL TROUBLE IN SHEEP.

Editor Southern Planter:

The writer has never seen but one flock of sheep in this country free from catarrh of the nose. This was a very small flock, consisting of 20 ewes, which had access to a cool dark basement shed at all times of day and night. The shed was well ventilated at one end, but was free from draughts. It was walled with stone. It was interesting to see those sheep

make for that shed when a rain came, and the greater part of the day was spent there. Gad flies had no chance at this flock. The owner said he had never heard his sheep sneeze and snort, which, you know, is fair evidence of the presence of grub. A most mistaken idea prevails in this section, that a "snotty" nose is a sure sign of grub, "fly" as many sheep men call it, or "rot." A gentleman who visited our farm recently saw a large, healthy ewe with dirty nose. He exclaimed: "You will certainly lose that ewe; she has the 'rot.'" I remarked that if we lost every ewe with "snotty" nose we would soon be out of the business. At the time I think there was not a single sick sheep in our flock, and yet some fifteen or twenty were running at the nose. An Englishman, who looked at our sheep once, said they were in dreadful condition. It made him very nauseated to see so many dirty noses. It was in fall, when nights were cool and winds high, and the sheep had no shelter. At that time, with very few exceptions, the sheep were in fine health. I said: "My man, those ewes are in fine shape. I am not much pleased with snotty noses myself, but when my sheep look like that I don't get alarmed." Since then I have visited his wonderful country, seen the grand flocks there, and wondered how God could have ever made climatic conditions better suited to sheep. Just think of walking through a flock of 700 head and not a dirty nose! But that is England! You can't find it here. You may ask if I propose to do nothing for sheep with dirty noses. I will do all that I can, for I no more think sheep with dirty noses are right than I would think a man with a severe cold well. You are aware that many strong, healthy men catch cold, and their noses begin to run first, the head gets stopped up, and they breathe hard, then they begin to get sore throats and lungs and cough. If care is not taken serious results may follow. In many respects sheep are affected in the same manner. I have seen all stages in healthy sheep. Now, you know that a man in fine health is apt to throw off a cold soon. So with sheep. The weak ones are apt to have continued trouble until discharges get greenish or yellow and purulent, and then, friends, your sheep is about ready for the grave-yard. Yet, such a sheep will often hang on poor and mean looking for years, and possibly you pass her off on another fellow as a cull ewe. Some think that in this stage the disease is contagious. I have often noticed certain types of colds, which the physician would call influenza, which would often attack several of the same family before it was stopped. La grippe, with all its attending ills, belongs to this class. Just such troubles are found among sheep. We do for our sheep about what most people do for their friends with colds; we let them alone and watch them sneeze and blow their noses and comment on the "glorious cold" and speculate as to how they "caught it."

A cold should not be neglected in people, and I think not, in sheep. In our country, however, with the rapid changes of temperature, winter and summer, and poorly ventilated sheds, it seems next to impossible to control catarrh in our flocks. The main thing is to provide better ventilated sheds, with *no draughts*, and keep sheep in *thriving* condition, separating from the flock those very seriously affected and treating them as suggested below. Did you know that going into a hot, stuffy room will give you cold more quickly than going into a cold room? Do you know that sitting down with a wet coat on is a sure cold producer? It is just so with sheep. If you want to see dirty noses sure enough, turn your sheep into a close shed and leave them in the bad air all day. In the evening they will come out sneezing and running at the nose "to beat the world." Please don't try this but once, even for the fun of the experiment.

Again, wet fleeces are sure to bring on colds, if sheep are put in a shed and forced to stand around in wet clothes. Rains are always bad for sheep. Probably, in England, where it rains all the time, and the sheep know nothing but wet clothes, they get used to it. How about it, Friend Jackson? (It doesn't always rain in England, Friend Arbuckle. A Scotchman usually calls an ordinary English rain "a little mist." When it does rain, however, it usually comes down in moderation, and not in the tremendous downpours we have here, and these moderate rains do not soak the fleece through, but remain largely on the outside, and the sheep shake off the water frequently, and thus do not become chilled through as sheep do here, especially the long woolled, open fleeced sheep. It is for this reason that we so strongly advise the keeping of the Down and Merino breeds here in preference to the long woolled types. The short, dense fleeces of these sheep, with the grease in them, keep out the rains, and hence largely conduce to absence of catarrhal diseases.—Ed.)

Again, lying under shade trees on hills where the wind is always blowing seems to cause colds. In England many shepherds cut down all shade trees, because they say "they make snotty noses." Well, in England they don't need shade trees. Here we do, unless we have sheds. I have always contended that every flock should have access to a dark, cool shed in day time. If such a shed is convenient, you will not have to trouble yourself about putting your sheep in. They are eager to find it, as soon as the sun gets hot, which is about 9 o'clock. They rarely come out before 3.30 P. M.

I very much fear that we must put up with colds in our flocks as long as our climatic conditions prevail, and this means we must give them extra care to keep up the health. Now, about those that are badly affected. They must be kept out of rains and draughts, fed on warm gruel, and to heal up the

nasal membranes, blow a mixture of bismuth and gum arabic up the nostrils with a quill or a piece of bent glass tubing. I advise that you use a little care, as the first time I tried it, the sheep blew the mixture down my throat. *Be sure to get first blood!*

Maxwellton, W. Va.

H. B. ARBUCKLE.

What sheep breeders in the South—indeed, all over America—need most to do is to breed up types of sheep suited to local climatic conditions, as the Englishman and Scotchman has done. There nearly every county has its special type of sheep, and some large counties, like Yorkshire, have specially adapted types for different sections of the county. Thus they have sheep which withstand without injury the cold and snow storms of the mountains and the constant wetness of the marshes on the lowlands, and the more equable climatic conditions of the Downs and rolling country. Persistent perseverance in attention to this policy of adaptability to environment has resulted in the very numerous fine types of healthy and disease resisting sheep, for which England is celebrated, and a similar policy will have to be adopted here before the best success is attained and entirely healthy flocks secured. Again, the Englishman and the Scotchman who makes sheep keeping a business, and that a most profitable one, does not begrudge the time of a man to care for his flock. The shepherd is not expected to keep his flock in the finest condition of health and profit by just "looking up" the sheep at odd times when he has nothing else to do, but he is expected and required to make the flock his first care, and to spend both day and night, when the occasion calls for it, in attendance on the flock. At lambing time a day shepherd and a night shepherd are on hand, and every ewe is given attention, as needed. In this way few lambs or ewes are lost, and the percentage of increase is large, and thus the cost of special care is easily covered. We have ourselves for years secured an average increase of 150 per cent. in numbers, and have made as high as 175 per cent. increase. This can never be done without some one always at hand to see that every lamb dropped has attention at once, and that both ewe and lambs are made comfortable and the lambs got to sucking and the ewes to giving down the milk. Let the lambs but once get a good start and the battle is won. Neglected for an hour and lambs will be lost.—Ed.

DAIRY COWS.

Editor Southern Planter:

The reply in your July issue to the inquiry of Mr. Pridgen, of North Carolina, asking for the best breeds of dairy cattle for the making of butter or

cream, is interesting not only from a breeder's, but from an editorial, standpoint. Some months ago a friend of mine wrote to a leading Western Agricultural journal, asking for information similar to that sought by your correspondent. He was entitled to it, and should have had it; but he only received a printed notice stating that their rule was absolute—to recommend no breeds, that the advertising columns of the paper contained full and reliable information upon the subject. Your candor, however, deserves our respectful commendation as subscribers, however much some of us may from your conclusions dissent. You say to Mr. Pridgen: "You want to keep Jerseys for the butter, and Jerseys or Holsteins for the cream trade." Now does he? Is your list fairly complete? Let us see! I do not propose to discuss the relative merits of these or of any other breeds of cattle. All pure breeds have some good points, and many of these breeds are pre-eminent in some particular line. It would not only be in bad taste, but bootless for a breeder of Guernsey cattle to record his opinion of the relative value of breeds; it suffices for one to know that he has made his choice. I shall, therefore, eschew argument, and at the risk of being a bit prolix, offer for your correspondent's consideration, and that of such readers as may be interested, such other accepted authorities as are to be found bearing upon his questions. I have at hand Farmers' Bulletin No. 106., entitled "Breeds of Dairy Cattle," written by the late Major Alvord, chief of the Dairy Division of the Bureau of Animal Industry, being a part of the Agricultural Department of the United States, at Washington. This bulletin may be had for the asking.

Whatever of ill a sometimes too extravagant and paternal government may have put upon us, nothing can be said at home, nor is said abroad, save of praise at the great work of this Bureau for the farmer at large. No greater factor for good has ever been at work in agricultural matters than this Bureau's daily application of science to the economic questions which confront the farming community as a class.

Let us see what this Bureau of Animal Industry has to say to its especial wards, the farmers, in regard to the breeds of cattle suited to the making of butter and cream. In the above named bulletin Major Alvord says at page 20: I quote, "*Characteristics*—Guernseys are a size larger than Jerseys, stronger boned and a little coarser in appearance. They are claimed to be harder and larger milkers, but both of these points are stoutly disputed. They are generally handsome and attractive cows." Again, under head of *Milk and Butter Records*, at page 21 of the same bulletin, the same author says, I quote: "The cows of this breed produce liberal quantities of milk, and it is of uncommon richness in butter fat, and in natural color. They are to be especially recommended for butter cows, as well as for market

milk when it secures a relatively high price, and they are noted for rich production combined with especial economy in feeding." (Italics are mine.) "They" (continuing the quotation), "possess great power of assimilating food and converting it into milk, yet are delicate feeders rather than gross, and will not bear much forcing. The grades, offspring of a Guernsey bull and well selected cow of no particular breeding usually make very satisfactory dairy stock." So much for the Guernsey from the Government standpoint as to butter and cream. Now, as to the Holstein, the breed that you single out as a cream cow. Let us see what the same Government bulletin says. At page 26, referring to their large milk yields, I quote: "The milk of these very large producers is generally pretty thin, low in percentage of total solids, and deficient in fat. The cows have been favorites for dairymen men doing a milk supply business, but in numerous cases their product has been below the standards fixed by State and municipal laws; on the other hand, there are some families of Holsteins, and single animals are numerous, which give milk of more than average richness, and show them to be profitable producers." Among other instances the author refers to the extraordinary yield and richness in fat of the milk of the Holstein cow "Jamaica."

Now, be good enough to bear in mind that I am making no comments, but simply quoting fairly and as freely as space will permit from government official reports, to show that when you speak of the herds best adapted to butter and cream making, not only the Guernsey must not be omitted, but that she has the strongest of claims for recognition at the hands of those purposing to enter upon dairying for profit. Again, let us see how the Guernsey stands at home. At page 168 of "Cattle Breeds and Management," a recent English publication, under the auspices of the publishers of the "Live Stock Journal," of London, the author says, I quote: "Although not so generally as the Jersey made the pet of the villa paddock, or the ornament of the park, it is the formidable rival of the breed in claim upon the attention of the dairyman, and the farmer whose living depends upon the profits of his business. The cow keeper who thus relies upon the produce of his stock to pay his rent and to give him a margin for the maintenance of his household, has to consider what he can make off each cow whilst in milk, and what eventually when she fails to breed or become superannuated for the dairy. If he can make something considerable by each outgoing cow he can fill her place with a very little addition to her value to the grazier, or at a small cost can soon make a good thriver worth as much as a dairy cow. Another point in her favor is that she gives more milk than the Jersey, perhaps about proportionate to her greater size, and to the consumption of food necessary to produce it, and to sustain herself.

This larger quantity of milk is rich in butter fat, reaching sometimes $5\frac{1}{2}$ per cent., and showing a very high average somewhat below that percentage. Her milk is exceedingly rich in color. The salesman commending a Guernsey cow will declare that her milk is as yellow as paint, and that she will color all the butter in your dairy.

Furthermore, Professor E. B. Voorhes, of the New Jersey Agricultural Experiment Station, in a carefully prepared address, the subject being "What the Guernseys Have Demonstrated in Public and Official Tests," says: "In the first tests of breeds that was carried on at the New Jersey Experiment Station, the Guernseys showed very clearly that they were superior to all others in the list for the production of a pound of butter, and in the cost of the production of a pound of total solids. It was shown, furthermore, that these animals, representing their breeds, showed it to be one which produced a large flow of milk of a very high quality—superior, in fact, to all others."

In keeping my promise not to be argumentative, I have been perforce compelled to quote at length from such recognized authorities as bear upon the questions under our consideration. The advance, however, that has come of recent years in the science of dairying, the advent of State Experiment Stations, and the more general use of the Babcock test, has caused a radical change in the market values of milk. The question of importance now to purchasing creamery or city milk dealers is not so much the quantity of milk as what is its content of butter fat, especially is this important for the maker of butter and the vendor of cream.

As I have no cows or heifers for sale, and I am now importing more from the Island of Guernsey for the making of cream, and *cream alone* (although my herd numbers nearly 100), it may not be amiss for me to offer a bit of personal evidence of a practical nature. In one of my barns side by side stood during May, 1905, nineteen milking Guernseys. They were not prodigies of their kind, not animals such as only some great millionaire might possess, but they were simply well bred registered Guernseys, and they had such care as is common to dairy cows owned by one in the ordinary business of the production of cream. They made a fair average list for the butter fat test, as they represented all stages, cows in full milk, cows failing in milk, and young heifers with first calf. The highest test was 6.6 per cent. of fat, and the lowest, a young cow with first calf, 3.7 per cent. of fat. The nineteen cows averaged 5.29 per cent. of fat under the Babcock test. Does not this confirm the foregoing English estimate of the breed, at least as to per cent. of butter fat?

Men who have been successful in business are wont to bring the sagacity which has brought their earlier and greater commercial triumphs in life to bear upon

their smaller ventures. While they have born in them the patriarchal, and at the same time truly Anglo-Saxon longing for flocks and herds, yet in their choice of a breed they act along the line of their earlier business training—they seek for that breed which, at the smallest cost, in the minimum of time, has at least the capacity of bringing the largest returns upon the capital invested. The fact that J. P. Morgan, A. J. Cassatt, Eben D. Jordan, H. McK. Twombly, and such men as Mackey, Converse, Duke, Griscom, and a host of others have investigated and adopted the breed, should count for something. Certainly their fixed ownership of any other commodity in active life would be a so-called “bull” point; why not one for the Guernsey in these days of practical affairs agricultural! Indeed, I am informed by Mr. Hope, who is actively in charge of Mr. Twombly’s herd, numbering some 500 cows, about 250 of which are registered Guernseys, the balance grades being rapidly replaced by Guernsey pure breeds, that when they go to Sullivan county, N. Y., for grade cows they must pay from \$10 to \$15 per head more for Guernseys grades than for any other. This herd I may say supplies a most exacting clientele, the rich folk about New York, butter at 55c. per pound and cream at 60c. per quart; and yet they have adopted the Guernseys for the purpose of *butter and cream making!* Would you exclude the Guernsey upon evidence like this from your list of the “best to make cream and butter?” Should your correspondent need further information he could not do better than to write to the Dairy Department of one of the Experiment Stations of one of the great dairying States, such as is to be found at Madison, Wis., or, better still, to our Experiment Station at Blacksburg, Va. Unfortunately, I think, the Guernseys were not entered in the dairy contest at St. Louis. The showing made by them at the Columbian Exposition, and their later success at the Pan-American at Buffalo only a few years ago should have made their admirers most hopeful of the outcome of any contest.

For my part, I would not, even though I could, abate one bit of the glory which is the rightful portion of the successful competitor at St. Louis. It is, however, but a simple fact that the Guernsey Club did not see that the expense and the risk to the animals engaged in so severe and prolonged a test could be adequately repaid, even by victory; and they declined to send their cows to St. Louis. However much this is to be regretted, it is only fair to be accurate; so it should not be said that the successful competitors at the Exposition defeated *all breeds*, but that they defeated *all breeds competing*; and the Guernseys did not compete.

WESTMORELAND DAVIS.

Morven Park, Loudoun Co., Va.

We gladly give insertion to this communication, and frankly recognize as we have always done, that the

Guernseys have claims amongst the highest to be ranked as dairy cows. Indeed, for our own choice, we prefer this breed to the Jerseys as being in our opinion constitutionally stronger. When we wrote the reply referred to, we did not mean it to be understood as comprising all the breeds of cattle that were entitled to be regarded as excellent for the dairy, but simply to be taken as a guide to the type of cattle calculated to meet the requirements of our enquirer, and in confining our selection to the Jerseys and Holsteins we had in mind the point that these two breeds, whilst amongst the best for the purposes named, were readily obtainable, and therefore more available than some other breeds which we could have named. Had we not had this point in mind we would have named at least three other breeds which, in our opinion, are entitled to high rank as dairy cows—viz., the Guernseys, the milking strain of Shorthorns, and the Red Polls. To have suggested these, however, would have been like simply tantalizing our enquirer, as they are all only to be had by the man in the South who is prepared to go wide-a-field for his stock and to pay high prices. To invite a man living within the quarantined section of the country to go north of that section for his stock, which he would have to do for cattle of any of these breeds, would be to invite him to incur a great risk of loss, and had this happened we should have felt ourselves to blame. In answering our enquirers we always strive to give such advice as shall be easily complied with, and especially is this so when advising as to live stock to be kept, as we regard it of the highest importance to the welfare of the Southern farmer that he should become a stock breeder and stock keeper, and we cannot hope to succeed in this if we suggest his buying cattle or other stock which can only be had far away and at high prices, and which are susceptible to diseases peculiar to the South. In a word, we have to regard *availability* almost as closely as *adaptability*. Jerseys and Holsteins, whilst meeting the requirements of the enquirer, are easily to be had within the quarantined section, whilst the other breeds, which we could have with confidence advised, are practically unavailable.—Ed.

Sow all land not needed for winter crops with crimson clover or hairy vetch, so as to conserve fertility and add humus to the soil.

When corresponding with advertisers, say you saw their advertisement in THE SOUTHERN PLANTER.

The Poultry Yard.

POULTRY NOTES—SEPTEMBER.

I had intended to give plans and photo-engravings of houses, coops, brooders, etc., this month, but was unable to get drawings complete in time. Will publish plans next month.

I have a number of inquiries for this month. L. B. N., Tarboro, N. C.: "Can you give me the value of poultry droppings as fertilizer and the best way to save and apply it?"

The value of hen manure varies very much. Poultry fed on corn, bran, wheat, meat scrap and green cut bone is much richer in plant food than when fowls are allowed to pick their own living, or where they are fed no meat and bone. No two samples show the same composition or analysis. I use dropping boards and keep them well covered with land plaster or S. C. rock (acid phosphate). Rake clean every day or two and keep in a cool, dry place. If to be kept any considerable time, add half a peck acid phosphate to every bushel of the droppings and pack firmly into a box or barrels. Apply broadcast and harrow in at the rate of 500 pounds per acre. For corn I prefer to drill in the row and mix well with the soil before planting at same rate. I have a home-made drill that pulverizes and sows this mixture perfectly. Have never used a fertilizer that gave better results.

C. M. T., same address: "Will not crushed oyster shell give same result as ground bone?" etc.

No. Oyster shell supplies lime only, while ground bone is rich in protein and lime. "Should dried meat scrap be kept before hens and chicks all the time?" No. Mix meat scrap in the mash. At this season of the year, 6 lbs. to every 100 lbs. of dry mash, composed as follows: 60 pounds wheat bran, 40 pounds coarse corn meal or cracked corn. Mix dry and make into a dry mash. I also add 2 pounds linseed meal during moulting. Much of the so-called meat scrap is unfit to feed, and some of it is very harmful. It is made from diseased liver, lungs (pluck) and partially putrified meat, and is dangerous. I bought some recently and the first feed I gave my flock caused trouble.

Mrs. F. E. W., Charlottesville, Va.: "I purchased some B. P. R. eggs (34) from ———, from which I only hatched 11 chicks. I lost four, and two of the remaining seven have long tail feathers. I think they are not pure. Would you advise using them for breeding purposes? Should I write to the party I purchased the eggs from or keep silent?" The party who sold you the eggs is either careless, dis-

honest or ignorant, and in either case it will do little or no good to write him now. Do not use them for breeding purposes, as you are almost certain to get a mixed lot of birds from such birds. I once bought 100 eggs from a man who advertised six different breeds. I bought W. Wyandotte eggs and hatched forty-two chicks, and had a trace of every breed on his farm. Had four fairly good Black Minorcas in the lot. I wrote him and he replied: "You are fortunate in having such a variety." Since that time I buy eggs only from breeders who breed one breed exclusively.

Second. "I bought two sittings Rhode Island Reds from a breeder in Massachusetts, and have a flock of 16, and no two of them are exactly the same color. Some have black feathers in tail and wings, some are streaked with buff, some have beautiful rose combs, and some have single combs, some have long, hard tail feathers. Will you tell me whether they are pure?" The Rhode Island Red is a new made breed, and does not breed true to color or any other points. They should be a solid cherry red, with black tail and wing flight, red eyes, reddish yellow beaks and legs. All new made breeds show this tendency to revert to the different breeds in their make up, and your stock is doubtless as pure in blood as any of them.

S. U. T., Tate Spring, Tenn.: "What do you consider the best breed of fowls for eggs; also for broilers and market purposes?" The Leghorns for eggs; White Wyandottes, White or Barred Rocks for broilers and market purposes. There is nearly as much in a strain as in a breed. Some strains or families of Leghorns are much better layers than others. So with all breeds. There is also much in care and management. I always advocate a pure breed, and the best obtainable strain of that breed. Do not cross two breeds. Breed in line. Select and buy males in preference to buying eggs, unless you know the stock you get eggs from. Where two or more breeds are kept on the same farm or near each other they are liable to be mixed or crossed. Leave fancy breeding and high-priced eggs to those who have money to lose. No one can sell good, reliable eggs for hatching for less than \$1 for 15, and very few are worth more to the average poultryman.

Richmond.

CAL. HUSSELMAN.

PROFITS IN POULTRY.

Editor Southern Planter:

No other business connected with agricultural life

seems so attractive as poultry farming, even those who fail in the business and retire from it aver that they are certain they could succeed in a new trial. In the beginning the general idea is that the business consists of throwing out corn with one hand and gathering in eggs with the other. While this may be true in a sense, there are many little things one must do in connection with this. One can keep a small flock of hens with profit, while one could not double or treble this number successfully, because with a larger number all the difficulties which arise, such as want of cleanliness, vermin, impure air, and risk of infection, increase in a much larger ratio than does the number in the flock. But if we have succeeded with a small flock, there is no reason why we should not be able to do so with several flocks, if kept in the same manner as the original one. As we increase our number of fowls, the greatest caution must be observed in adding to the number of fowls kept in each house or pen. We believe as much depends on the management of chickens as on the characteristics of the different breeds. It is of great importance that the young fowls should, at the close of the day, have full crops. The nights are long, and as soon as the chickens have digested all their food they stop growing for the time being. It is a very good plan to feed them as late in the day as they can see to eat and as early in the morning as possible. They crave a variety of food; there is nothing better than plenty of good, clean, sweet grain, such as corn, wheat, oats, millets, barley, etc. A mash once a day made of skimmed milk thickened with ship stuff and a portion of good meat meal thoroughly mixed, and made quite dry, is excellent for them; also sunflower seed fed very sparingly is of great benefit to chickens through the molting season. The greatest profit in poultry is from early hatched chicks and winter eggs. We may have them plentifully if we will give our hens good care during the molting season, and just keep on giving them the best of care and continue to do so all the fall and winter. They will be sure to repay us for our trouble if they are the right kind of hens. If they are not sell them at once and replace them with a breed that will bring you money, for time and labor spent with them. One who keeps poultry and gives it as little time as possible must expect as little profit from the poultry yard in return. A fresh egg is a joy and delight in many ways to the farmer's wife and his family.

MRS. CAL. HUSSELMAN.

Richmond, Va., R. F. D. 6.

Writing advertisers, mention *The Planter*.

TURKEY RAISING.

Editor Southern Planter:

We have been raising turkeys many years, and with considerable success. We usually keep one tom and six or eight hens, one or two of these old ones, and the others one year old. We keep the white breed. We always have a young tom and one not too large. From a flock this size we usually have about 100 eggs. We aim to set these as nearly all at one time as possible, and when they are hatched we give 25 young ones to each hen. As soon as they are hatched we give to each chick a black pepper corn, and after that feed them hard boiled eggs one to every ten poults for a time, and thus get them well started. Last year we raised nine-tenths of all that were hatched. Now, we have nearly 100 young ones looking well. After the first batch of eggs were hatched one of the hens, from which the poults were taken, laid again. The old tom followed her to her nest and made a nest beside her's and took the eggs away from her into his nest, and has now sat on them for three weeks.

M. M. BLACK.

Albemarle Co., Va.

A subscriber writes us that she has lost 326 young turkeys this year, weighing from half a pound to a pound and a half. She has only saved 12 out of all she hatched, notwithstanding she has done everything possible for them. They have all died from diseased livers.

This lady sent us several of the livers for inspection. These were spotted all over, and occasionally a small, white worm could be seen in the spots. There is no doubt but that the disease which killed the turkeys was the so-called blackhead disease. This disease has been very fatal to turkeys in numbers of places this year, and appears to be spreading over the country. It has been carefully investigated at the Rhode Island Station, but no cure has been found for it. It is a microbic disease, much aggravated by inbreeding, and is an evidence of depleted vitality in the stock. No medicine seems to have any effect in stopping or curing the disease.—Ed.

PERUVIAN GUANO—EWES TO ONE BUCK.

1. Please tell me through enquirers' column the analysis of the new Peruvian guano, and its comparative value?

2. How many ewes should run with one buck for best results, and the most desirable age of bucks?

Fauquier Co., Va.

ENQUIRER.

1. There are two or three different kinds of Peruvian guano now on sale, each having a different analysis. Write the Oliver Smith Co., of Wilmington, N. C., the Southern Agents for the sale of this guano, and ask them to send you their circular giving the analyses of the different kinds. We have a high opinion of this guano as a fertilizer.

2. In this issue you will find our advice on this subject in our live stock columns.—Ed.

The Horse.

NOTES.

With the close of the Warrenton Horse Show, which came off on August 30th and 31st, the Virginia Circuit of open air shows ended, and there will be a lull during the present month of September, but for October the more pretentious affairs at Lynchburg, Richmond, and Norfolk are scheduled and to be held under cover in the spacious amphitheatres at those cities. Perhaps the horse show fad is at its height just now, but be that as it may, certainly the success of the Virginia Circuit of shows so far can be pointed to with pride, and enthusiasm waxes high when the big affairs fixed for next month are mentioned. The management of the Lynchburg Horse Association announces "A Virginia Show for Virginia Horses," but the bars remains down at Richmond, and the different classes are wide open to the world, and a like condition of affairs prevails at Norfolk. President H. M. Sackett is the leading spirit of affairs at Lynchburg, though backed by the ablest men in the "Hill City." President J. T. Anderson, Secretary James T. Hide, of New York, and Assistant Secretary W. O. Warthen are at the helm of the Richmond Show, while President C. O. Wren, Vice-President H. B. Goodridge and Manager C. W. Smith are guiding the affair at Norfolk. Lynchburg's dates are October 3d-6th; Richmond, October 10th-14th; and Norfolk, October 16th-20th.

The bay stallion Woolford, 25537, by Judge Salisbury, dam Norma Sprague, by Governor Sprague, has been sold by W. J. Carter to W. C. Saunders, the Brook Avenue druggist, this city, by whom he will be used in the stud. This horse was advertised in The Planter, and replies from varied sections were received, among those represented being South and far West. Reverting to the breeding of Woolford, the Governor Sprague cross is more likely to make itself felt in this section sooner or later, seeing that it enters into the pedigrees of those famous trotters Sweet Marie and Tiverton. The latter, I may add, is owned by the former Richmonder, A. B. Gwathmey, a Virginian by birth, and ever loyal to the State of his nativity.

The great stable of show horses, owned by David Dunlop, of Petersburg, has cut a wide swath at the open air horse shows this season, commencing at Baltimore, in May, where they made a fine showing; likewise at other places, and then right down the line of Virginia open air affairs. At Coggin Hall, the fine country home of Mr. Dunlop, near Gee, in Prince George county, Va., he has a dozen or more richly bred thoroughbred brood mares, which have been mated with Aloha and other sires of note. In

addition to his big stable of show ring performers, the master of Coggin Hall is forming a racing stable also, having recently purchased some promising runners, and later on some good steeplechase horses will be added.

No Virginia summer resort of recent years has gained more rapidly in public favor than the Mecklenburg Hotel, at Chase City, which is ninety miles south of Richmond, on the line of the Southern Railway. With the new hotel, modern, spacious and well equipped, is a splendid sanatorium, with the able practitioner, Dr. J. C. Walton, in charge. Well known as a Southern Railway surgeon and as proprietor of sanatoriums at Reidsville and Danville, later Dr. Walton was the assistant of Dr. Baruch, of New York, the famous hydropathist. The Mecklenburg Chloride of Calcium and Lithia waters received medals and high awards at the St. Louis Exposition and Chicago's World's Fair, and have attained fame in the treatment of Bright's disease, nervous dyspepsia, etc.

Dr. J. C. Walton, resident physician at the Mecklenburg, Chase City, Va., like numerous other successful men of his calling, is a breeder and student of pedigrees, and among his possessions, bred by himself, is an elegant two-year-old filly, by the great young sire, Lynne Bell, 2.10 1-4, dam Princess of Ridgefield, by Prince Belmont. During recent years Dr. Walton has owned, among other fast trotters and pacers, Miss Walton, 2.23 1-4; Sisterina, 2.29 1-4; Marie, 2.30 1-4, and a full sister to the latter that was sold for export, and did well in Europe.

Among the guests at The Mecklenburg, Chase City, Va., this season are General Julian S. Carr, of Durham, and Mr. L. Banks Holt, Alamance Farm, Graham. General Carr bred Wealth, 2.10, the fastest of North Carolina bred harness horses. Mr. Holt formerly owned the famous pacer, John R. Gentry, 2.00 1-2, and is rated as the prince of North Carolina owners and breeders.

Imp. Fatherless, the English bred son of Isonomy and Orphan Agnes, who heads the Ellerslie Stud of R. J. Hancock & Son, Charlottesville, Va., has a couple of handy three-year-old winners out this season in Mistis and Workman while nine of his two-year-old sons and daughters have been returned winners. The latter are Minna Baker, T. S. Martin, Judge White, Merry Belle, Venus, Little Rose, Pater, Bonnet, and The Clown.

BROAD ROCK.

Inquirers' Column.

CRIMSON CLOVER SEED.

What is the average yield of German or Crimson clover seed per acre.

WARNER HURST.

Northumberland Co., Va.

Crimson clover usually makes a heavier yield of seed than red clover, and this, as you know, varies from 2 or 3 bushels up to 6 bushels to the acre. We have no exact figures of yield of Crimson clover, but probably about 5 or 6 bushels to the acre would be an average yield.—Ed.

PLANT FOR NAME.

I enclose sample of grass that I find growing in patches in my lawn. Please give it a name.

G. W. LEVI.

Clarke Co., Va.

The grass is Bermuda grass. It is one of the best of lawn grasses for a hot climate, always remaining green through the hottest weather. The only fault it has for this purpose is that it dies down in winter. The specimen sent is one of the many varieties of this grass, some of which have coarse leaves and stems. This specimen has the finest leaves and stems we ever saw—so much so that we doubted it being Bermuda, but the Botanist of the Department of Agriculture says that it is Bermuda.—Ed.

UNTREATED PHOSPHATE ROCK AS A FERTILIZER.

The question asked in July number of Southern Planter, page 615, was not whether undissolved phosphate could be made to take the place of lime, but whether it could be made to take the place of acid phosphate, if used in connection with steamed bone. Have any of the experiment stations determined whether the fine roots of plants have power to dissolve and take up this fine ground phosphate?

Will alfalfa grow on rich, red clay land?

Albemarle Co., Va.

W. H. HARRIS.

Experiments made both in this country and England have unquestionably proved that plants have the power to dissolve out the phosphoric acid from untreated rock and Basic slag, but the action is slow and largely depends on the fineness of the grinding of the rock or slag. Where it is ground to an impalpable powder, they seem able to get benefit pretty quickly; but where it is coarse-ground, the time required to get out the phosphoric acid is greatly lengthened. Experiments made in Illinois have shewn conclusively that when the untreated rock is composted with farmyard manure, that the phosphoric acid is made largely available at once. We do not think that using it along with steamed bone will in any way tend to make the phosphoric acid more available, except in so far as that the bone will tend to make the growth of the crop seeded more vigorous, and the more luxuriant the growth, the greater the power of the root action in dissolving out the needed plant food from the raw elements in the soil. Yes, we have known alfalfa to do well on such land.—Ed.

PREPARATION FOR CLOVER AND TIMOTHY.

Two acres wheat stubble just turned; light, glady soil; not very fertile. I desire to put in clover and timothy. My idea is to apply 25 bushels lime per acre, some rough manure, and 400 lbs. acid phosphate per acre. What do you think would be best? Where can I get lime? What about inoculating the land?

O. C. BRUTON.

The course you suggest should ensure a stand of clover and grass. Apply the lime at once, and work into the soil; then apply the manure and fertilizer broadcast and work in. We would suggest that instead of acid phosphate alone you should use half acid phosphate and half bone meal.

You will thus get a more permanent fertilizer. We are not sufficiently familiar with your railroad facilities or local surroundings to know where you can obtain lime the cheapest. You will find it advertised in the Southern Planter, but whether these advertisers can do better for you than local merchants or dealers, we do not know. Your Agricultural Department at Raleigh should be able to advise you as to the best point from which to get lime. If clover has been grown in your land before, you should not need to inoculate, but you can get inoculated seed from one of our advertisers, T. W. Wood & Sons, Seedsmen, of this city, and if clover has not been previously grown on your land, it would be advisable to use this. Sow the clover and timothy without a grain crop with it, and you will more certainly succeed in getting a stand and a crop.—Ed.

POULTRY RANGE AND PREPARATION FOR VEGETABLE GROWING.

I have a spot of ground that is of a very thirsty nature, sandy soil, that I want to put in early vegetables in the spring. Will you tell me through your enquirers' column for September what will be the best crop to sow this fall to furnish a green range for poultry this winter, and when to sow? Would lime improve the land?

Durham, N. C.

A SUBSCRIBER.

Plow the land at once deeply and then apply 1 ton of lime to the acre broadcast and harrow in. This will tend to make the soil more compact. Then apply broadcast 250 lbs. of acid phosphate and 100 lbs. of muriate of potash to the acre, and work in, and then sow 15 lbs. of Crimson clover seed and three-quarters of a bushel of wheat, oats and rye mixed per acre. This should give you a good winter poultry range, and when plowed down in the spring should help the vegetable crop very much. If you have farmyard manure or poultry droppings, apply these as a top dressing during the winter. You cannot easily make the land too rich for vegetable growing.—Ed.

ALFALFA AND CRABGRASS.

I put in a small piece of alfalfa last August. It came up and did fairly well. I have cut the third crop this season, but the last one had a good deal of crabgrass in it, and this is putting up ahead of the alfalfa now, and about to choke it out. What would you advise to do with it? I want to put in some more this fall. Advise what to do to prevent this trouble another year. Want to sow after cutting tobacco the last of August.

C. R. SANDERSON.

Cumberland Co., Va.

We would keep cutting off the crabgrass and alfalfa as it grew a few inches high, and leave it as a mulch on the land. This frequent cutting will prevent the crabgrass from seeding, and as it is only an annual grass, you will thus get rid of it. Give the alfalfa a working with a disk harrow across it, and then apply 200 or 300 lbs. of inoculated soil per acre, and top dress with well-rotted farmyard manure, or, failing the farmyard manure, or in addition to it, give a top dressing of bone meal or bone meal and acid phosphate. The way to prevent trouble with crabgrass and other weeds is to keep the land under frequent cultivation the year previous to seeding alfalfa. This brings the weed and grass seeds to the surface when they germinate, and are then killed by the next cultivation. When seeding the alfalfa, do not bring to the surface soil

from any greater depth than has been previously cultivated and had the weed and grass seeds killed out.—Ed.

SMOKE-HOUSE—CURING HOG MEAT.

Will you kindly give me in your valuable paper plans and specifications for a smoke-house sufficiently large to handle the meat from 200 hogs; also give me few details for curing dry salt smoked meats? In the days before the civil war the cotton planter raised his own meat, but that day is so long ago that to the present large cotton planter the method is a "lost art." Please bear in mind that I am entirely ignorant, and will appreciate your going very considerably into detail. I want to build a permanent smoke-house. We have no hickory, but plenty of pecan wood.

Jefferson Co., Ala.

W. S. LOVELL.

In this issue you will find information as to building a smoke-house given in enquirers' column in reply to "C. Virginia." The house there advised was intended for smoking the meat of 40 hogs. A proportionate increase of size would be needed for 200. If you are not a subscriber to the Breeders' Gazette, send for the copy of August 16th issue for further information on this subject. We can get you the Gazette with The Planter for 1 year each for \$1.50. We have not the space this month to describe the method of curing hog meat by dry salting, but will do so in a later issue before hog-killing time. Pecan wood will, we think, be found suitable for smoking meat.—Ed.

CRIMSON CLOVER.

1. Will Crimson clover grow successfully here (the western part of Sampson county)?

2. I have a plot of land that I intend using for a cow pasture this winter. Would you advise sowing Crimson clover with a mixture of rye, oats and wheat; or, if not, what would be the best for me to sow? I intend planting the land to corn next year.

3. Is Crimson clover equal as a legume to cow peas? The farmers of this section know practically nothing of the clovers, and any information you may give would be highly appreciated.

Sampson Co., N. C.

OTIS WARD.

1. Yes. It may not grow very successfully the first year from the absence of the clover bacteria in the soil, but if the land or seed be inoculated either with the bacteria or soil, which can be purchased from advertisers in our columns, or if inoculated seed, which can be purchased from advertisers in our columns, be sown, the crop will no doubt succeed and prove most valuable to every one growing it, both as feed and as an improver of the soil.

2. Yes. Sow the mixture of clover and grain, and let it get a fair growth before grazing, and do not graze when the land is wet.

3. Yes. It is the natural complement of the cow pea for the South. The one grows in the summer, the other in the winter, thus making it possible to continue the improvement of your lands all the year round.—Ed.

PREPARATION FOR CORN CROP.

I have four acres of land that has been in corn two years in succession, then put in oats and followed with wheat, which yielded 14 bushels to the acre. I wish to put this in corn, and would like to have some direction how to proceed in order to get the best results. I want to cover it with manure, such as chip dirt, stable manure, and rotten straw, then plow with subsoil plow following. I would like to be advised about fertilizer—what kind and amount—so that I can purchase same this fall. Where can lime be purchased, and at what price?

Washington Co., Va.

E. M. BALL.

It is very poor farming to keep growing one grain crop after another on the same land without recuperating crops

intervening or heavy dressings with farmyard manure to restore and maintain the humus content of the soil. The result can only be rapid depletion of the fertility of the soil. The best course to take with the land now will be to plow it as you suggest, harrow fine, and seed with Crimson clover, 15 lbs. to the acre and 3 quarters of a bushel of wheat, oats and rye mixed in equal parts. If clover of any kind has not been grown on the land for some years, it would be well to inoculate the clover seed with the proper bacteria, which can be had from the Experiment Station, Blacksburg. This should give a winter cover crop and make a good green fallow to turn under to help to restore humus to the soil. During the winter put the stable manure, &c., on the land as a top dressing, to be turned under with the clover. After this crop has been turned down, apply 1 ton of lime to the acre and work this in when preparing the land for the corn crop. You can get lime at Ripplemead, in your adjoining county. An application of 300 lbs. of acid phosphate to the acre previous to the planting of the corn; or, if you can get it in time previous to the seeding of the Crimson clover, which should be got in now as soon as possible, will help both crops.—Ed.

CATARRH IN SHEEP—RYE AS A GREEN FALLOW.

Will you please tell me through the Planter a remedy for a cough in sheep? I have a small flock of 26. One of the old ewes took with a cough very early in the spring and grew worse, and more of them took it, and now every one, both old and young, have it. The discharge from the nose is of a bloody color. I have lost two lambs with it. Will you give me a remedy, and tell me the cause? Also please tell me through your paper if it will pay to sow rye to plow down to plant corn, instead of sowing Crimson clover, as the rye is much easier to get a stand with than Crimson clover? How much would you advise to sow to the acre, and what time of year is best to sow?

Northumberland Co., Va. WAYLAND F. BOOTH.

In this issue you will find an article dealing fully with the catarrhal disease in sheep.

Rye will not serve the same purpose as Crimson clover as a preparation for a crop. Rye will add nothing to the fertility of the land, except some vegetable matter. Crimson clover, on the other hand, will gather nitrogen from the atmosphere and fix it in the soil for the benefit of the following crop, in addition to adding vegetable matter to the soil. The only purpose served in sowing rye on the land beyond growing some vegetable matter to add to the soil, is that of conserving fertility by preventing the leaching out of unused fertility by the winter rains. This it does by taking up the unused fertilizer in the soil to make its growth and by binding the soil together with its roots, and thus preventing washing of the soil. Sow 2 bushels to the acre any time before the end of November.—Ed.

SMOKE-HOUSE.

Will you kindly let me know through your columns how to build a smoke-house to get the best results, and oblige,

C. VIRGINIA.

We had a similar request to this last year from a subscriber, and asked Mr. J. O. Thomas, of Smithfield, Va., the celebrated curer of Virginia hams, to give us his opinion on the subject. He wrote us as follows: "A smoke-house to hold the meat of 40 hogs, I think, should be 14 feet square, 12 feet pitch—that is, 12 feet from the sills to top of plates, with sharp roof covered with shingles, the building underpinned with brick or stone. The house should be built tight, so as to be dark and be kept clean.

Smoke slowly, so that the meat will not get warm, and smoke two or three weeks, or until the meat is colored to suit. Meat should lay in salt from three to five weeks, according to size of meat. Pork should never freeze. Never use lightwood to smoke with." In the Breeders' Gazette for August 16, 1905, Mr. Wing answers a similar enquiry, giving details of a more costly building.—Ed.

DISEASE IN HOG—FODDER CORN.

1. I lost a very fine sow about two weeks ago. She apparently choked to death, for she wheezed or breathed so hard that you could hear her two hundred yards away. What do you think was the cause of death, and is there any cure for that wheezing in the throat?

2. When is the proper time to cut sowed corn for fodder, and how to cure it? W. S. COX.
Spotsylvania Co., Va.

1. The cause of death was in all probability bronchitis or pneumonia. Hogs suffer from these diseases just as human beings do. Nitrate of potash given in the feed in small doses—say of a teaspoonful each day—will sometimes give relief.

2. Let the fodder get as fully grown and mature as possible without beginning to lose the blades, and then cut and let wilt a day or two, and then set up in shocks to cure out. When cut when in full growth, the fodder is so full of watery sap that it loses much of its bulk in curing, and it is difficult to cure into nice feed.—Ed.

GRAPE GROWING.

I wish some information on grape culture; will expect to raise them for market. What are the best varieties for marketing? What class of land is best? What kind of fertilizer is best? What quantity and what kind of arbor for training vines on? W. M. CORBETT, JR.
Pender Co., N. C.

You had better write your Experiment Station at Raleigh on this subject. Professor Massey has, we believe, done considerable experimental work with grapes at the station, or in connection with his work at the College, and we think has issued a bulletin on the subject. He would be much more capable of giving you advice than we can be, as, in addition to his personal work with vines, he also knows the local conditions of your county as to soil and climate, which we do not, and these will have great bearing on your success.—Ed.

SWEET CLOVER.

I have been trying to get a catch of this clover on my farm for six or eight years, but have never succeeded. Can you tell me why? I have sown it in unprepared land, I have sown it in well-prepared land, I have sown it in rich and poor land, I have sown it in both fall and spring, but I never have seen a plant on the farm, except what I dug up one spring and set out. It grew that summer and bore some seed, but that was the last of it. Will some one tell me where I can get seed that will grow? Also tell when and how to sow? The seed that I have been using, I gathered along the railroad. Any information along this line will be thankfully received.

Confidence, W. Va. C. M. FARRAR.

We are at a loss to understand why you cannot get a catch of Sweet clover on your farm, when it grows wild on the railroad. Its growing wild would indicate that the soil and climate are suitable. We do not know where you can buy seed. Possibly some of the seedsmen who advertise in our columns may have it, as it is sometimes grown as a farm crop in the more Southern States. It is not grown in this State as a crop, but is to be found growing

wild all over the Middle. Southern and Eastern sections. Possibly some of our subscribers can throw some light on this subject.—Ed.

GRASS FOR LAND SUBJECT TO FLOOD.

Several acres of my bottom land cannot be cultivated, because of frequent overflows, and it is covered with weeds. These are mowed off, but are not followed by volunteer grass of any kind, and the problem with me is to find a grass that will replace the weeds and give a crop of grass. Would Johnson grass succeed? R. S. LACEY.

Alexandria Co., Va.

No grass, except it be Johnson grass or one of the marsh grasses, which are usually of small nutritive value, will be likely to succeed on frequently overflowed land. A subscriber stated in the last issue that he knew flooding did not hurt Johnson grass.—Ed.

PLANT FOR NAME.

I enclose herewith a weed which grows very fast and thick all the summer, and is hard to keep down. It has only been common in this section for the past five years. Please advise what it is. J. P. FLETCHER.

Henderson Co., N. C.

The plant sent is *Galingsoga parviflora*. It is a weed of no value. The only way to get rid of it is to smother it out with a heavy shading crop, like cow peas, and to make the land rich, so that it will produce heavy crops of good feeding value.—Ed.

PEANUTS.

Please tell me where I can get information on peanut culture in your next. THOS. J. NOBLE.
Princess Anne Co., Va.

We can supply you with a book on the Peanut, giving full information as to the culture and preparation of the crop for market. Price, 50 cents.—Ed.

SEEDING TO GRASS AND CLOVER.

I would like to seed a piece of land this fall in clover and "meadow oat grass." How many pounds of seed must I put to the acre, and how must they be proportioned?

King & Queen Co., Va.

P. H. BURTON.

Sow 2 bushels of tall meadow oat grass and 8 lbs. of red clover seed per acre.—Ed.

WHEAT SEEDING.

I have a piece of land (containing about 4 acres) which I wish to get in wheat. I cut this summer about two tons of hay and clover per acre from it. I have fallowed now. I want to know what fertilizer to use on this lot that will give me the best results.

Pittsylvania Co., Va.

SUBSCRIBER.

In this issue you will find our advice as to the preparation for and seeding of the wheat crop. Upon land in a condition of fertility to produce 2 tons of clover and hay to the acre, little beyond phosphoric acid should be needed to make a good crop of wheat, and we think, therefore, all you should apply would be 200 or 300 lbs. of acid phosphate per acre, or half acid phosphate and half bone meal.—Ed.

WHEAT SEEDING.

Am preparing a field of 25 acres for wheat; been in clover and peas for two years; red soil. What kind of wheat best to sow? How much to the acre? Kind of fertilizer and quantity, etc.? Have limed the field once.

Alamance Co., N. C.

SUBSCRIBER.

In this issue you will find our advice on seeding wheat, and to this we refer you. On land which has been in clover and peas two years, it will not be necessary to use any nitrogenous fertilizer, and red land limed needs no potash; therefore all you will need to apply will be acid phosphate, say 300 lbs. to the acre.—Ed.

Miscellaneous.

FARMERS' NATIONAL CONGRESS.

The 25th annual session of the Farmers' National Congress will be held in the Chamber of Commerce of the City of Richmond, Va., from the 12th to the 22d September. The president of the Congress for this year is Mr. Harvie Jordan, of Georgia; the first vice-president, Mr. B. Cameron, of North Carolina; second vice-president, Mr. Joshua Strange, of Indiana; John M. Stahl, of Quincy, Ill., is the secretary. Long list of delegates have been appointed by the Governors of the different States, and it is expected that there will be a large gathering of farmers from all sections of the country. The Congress will be welcomed by the Mayor of the city, the Governor of the State, and the President of the Chamber of Commerce. The programme of subjects for discussion is a long one, comprising amongst others the following: "The Field and Functions of the Farmers' National Congress; "The Tariff as it Affects Agriculture," "The Federal Government and the Farmers," "Agricultural Resources of the South," "Government Expenditure in Relation to Agricultural Interests. All these and other kindred topics will be introduced and discussed by farmers and gentlemen of national reputation, and will be open for discussion by all present. We trust to see a large attendance of farmers from this and other States, and spirited discussion of all the subjects introduced having bearing upon the social and economic welfare of farmers and of the agricultural interests of the country.

ROANOKE AND VIRGINIA STATE FAIR.

This annual Fair will be held at Roanoke, Va., September 26th to 29th, and promises to be a great affair. Mr. Cyrus T. Fox, who has again the general management of the undertaking, writes us that there is being more general interest taken in the Fair all over this State and the adjoining ones than he has ever before known, and that the application for stall, stable and pen room from noted breeders and exhibitors of live stock are a long way ahead of those for any previous Fair. The committee has been very liberal in allotting the premiums, which exceed \$8,500, and these should ensure spirited competition in all classes of live stock. In addition to the premiums offered by the society, there is a long list of special premiums offered by firms and individuals in and outside the State. We invite the attention of our readers to the advertisement of the

Fair, to be found in this issue, and trust that the endeavors of the committee and manager to make a Fair worthy of the support of the people of the South will receive full recognition and be rewarded by a greater attendance than ever before. The facilities for reaching Roanoke from all parts are good, and the country in and around that city is interesting and pleasing to the eye. Now that there are so few agricultural Fairs held in the State this one ought to receive such patronage as to place it on a permanently secure financial basis.

NOTES ON THE STATE FARMERS' INSTITUTE, ROANOKE, VA.

Editor Southern Planter:

It was quite a common expression that the meeting was the best representative "farmers' meeting" ever held in the State. While it was an able and progressive body of men who "till the soil," still in this respect it was hardly equal to some meetings of our State Horticultural Society. We naturally expect this to be the case, since horticulture seems to advance the man rather more intellectually than general agriculture. But we are proud of both of our State organizations. The meeting was just what we expected it to be after we learned who the officers were. Some time before the first meeting was held we advocated, through the *PLANTER*, a State organization of farmers, knowing what such organizations had done for some other States, and believing Virginia could be benefited in the same way. The farmers were there "from all over the State." The State was well represented. The farmers will carry some sort of message concerning the meeting and V. P. I. to the "four corners of the State." Will it be a good one? I believe it will. Of course, not everything in the meeting went just like we wanted it (it is usually so in such meetings), still the addresses, on the whole, were good. A few were as fine as we have ever heard. The addresses were plain and practical. Many practical questions were asked and answered in a practical way. The scientist and the farmer came close together and a good feeling existed between them. The man who still claims that "book learning" in farming is "no good" received a black eye in Virginia, which he will carry for many years.

The organization steered clear of the great rock upon which many such organizations have split in the past—namely, "political tricksterism." The poli-

ician had no place in the meeting. It was purely a "farmer's day."

There is an undercurrent of strong sentiment among the farmers about changing some of the ways the farmers' interests are managed in the State. While public expression upon the same was choked off, still this sentiment for bettering the farmer's condition in the State will surely reach the surface, and it may not be twelve months ahead of us. The farmers felt their strength at this meeting as never before. The meeting will grow in strength and in numbers.

There are a few minor details in the organization to be perfected before it will run smoothly, such as a time limit to the length of an address and the discussion, and the division of the body into sections, such as horticulturists in one, tobacco men in another, dairymen in another, and general farmers in another. These bodies could meet in separate buildings and discuss subjects peculiarly interesting to their work, and not bore those who are not interested. General meetings could be held where all would come together for passing resolutions or transaction of other general business. This arrangement, however is not so practical where several rooms or buildings are difficult to obtain close together.

Another feature we want to see developed in the future is that of bringing small exhibits to the meeting. These things to consist of some specially fine variety that grew in the State. Sometimes agents of various machines crowd out the farmer's exhibit. Striped paint and catchy circulars sometimes cause the farmer to miss hearing some important truths.

The farmers learned the needs of the Virginia Experiment Station. They saw their agricultural building making its second effort to rise above the ground. They thought it best to ask the Legislature for another appropriation for it, to make sure it would rise up in all its strength and beauty, not having any of its "locks shorn."

Ex-Governor Tyler makes a fine president for a meeting of such a body of farmers. The people have confidence in him, and we feel that he is "one of us."

Prof. Soule, the Secretary, whom we knew in former years, has not lost any of his enthusiasm and energy. The people are rapidly placing confidence in him. His past experience in the work serves him well in starting this new organization.

After having almost grown up in farmers' meetings, it did us good to meet again with people of our own belief and occupation on Virginia soil. We are sure others felt likewise. Let us come again in still larger numbers next year. R. H. PRICE.

THE NEEDS OF THE VIRGINIA AGRICULTURAL COLLEGE AND EXPERIMENT STATION.

Editor Southern Planter:

I read Prof. Price's letter in a recent issue of the SOUTHERN PLANTER with great interest, particularly that part with reference to money for a building and equipment for the Agricultural Department. The building, as outlined in an article which appeared in the SOUTHERN PLANTER some months ago, is now under way, and as it is to be constructed of stone, will present a substantial and pleasing appearance. Just enough money was appropriated by the last Legislature to erect the building, and it seems appropriate in view of what Prof. Price has said that the real needs of the College of Agriculture should be presented.

While the Agricultural Department is making progress along every line, and the Experiment Station developing rapidly as well, we are in need of much special equipment, which we do not now possess. In many of our colleges it is deemed proper to provide the chemical and engineering departments with finely equipped laboratories, which is as it should be, but when one speaks of laboratories for the College of Agriculture most people are inclined to wonder what they can be used for. The time has passed in an Agriculture College when a boy can afford to spend two or four years or even take a short course in which the principal element of instruction is to turn him out with an old mule to break up a sod field. What he needs is to be taken into the laboratories and taught the principles of the many sciences which govern agriculture. A student can be taught all about soil formation, the action of the various fertilizers on the soil, and the influence of moisture and heat and soil management on crop growing in a laboratory in a short period and in a comprehensive manner. This subject cannot be taught to advantage in any other way; yet it would cost \$3,000 to \$4,000 to equip a soil physics laboratory decently. The same is true of a laboratory for animal husbandry, seed testing, field experiments, animal breeding, animal nutrition and dairying. A modern up-to-date dairy equipped for the instruction of the sons of Virginia farmers would alone cost several thousand dollars. But some one says equipment of this kind would be of no use to our sons, because they could not have the same when they returned to the farm. It is not necessary that they should have, but a dairy school for student instruction should contain every modern piece of dairy equipment on the market, whereas a separator and churn will be all that is needed on the average farm.

Modern education along agricultural lines has been sufficiently systematized and has made enough progress to demonstrate its practicability, and it is hardly necessary to assure the farmers of Virginia that the course of instruction in this institution will be

conducted along the most practical lines consistent with giving their sons a proper insight into the sciences on which all the fundamental principles governing agriculture rest. It will take at least \$25,000 to properly equip the splendid building which is now being erected for the agricultural college of the State in order that the farmers' boys and those who desire to study agriculture may have equal facilities and privileges with those in any other department of the institution.

We also need a stock judging pavilion for the joint use of the Departments of Animal Industry, Veterinary Science and Field Investigations. The upper floor of this building would be devoted to grain judging and plant improvement; a section of the lower floor to veterinary clinics, and another part to stock judging. There is not a good agricultural college in the country to-day that does not possess such a building. This institution owns six representative breeds of cattle at the present time, and yet we have not the facilities to get these animals properly before our students to instruct them in the use of the score card and in the general study of animal conformation, which is absolutely necessary for the development of competent and successful judges. In view of the State's great interest in live stock, such a pavilion is sorely needed. A suitable one could be erected at a cost of from \$10,000 to \$15,000, and it would be a splendid investment for the State. Some of our barns and breeding herds need to be improved and enlarged, and for this purpose an appropriation of \$15,000 should be made. We should undertake investigations in breeding, feeding and rearing horses, one of the State's leading industries, and yet sadly neglected in the past and likely to be so in the future unless the Station's revenues are increased. Will the horsemen permit this condition to continue? Fifteen thousand dollars is a small amount of money to appropriate for the improvement of one of the State's principal industries. The Iowa Agricultural College has \$85,000 invested in pure bred live stock. Shall the boys of Virginia have an opportunity to obtain at home the best possible instruction along lines of animal husbandry or must they seek for it elsewhere? Shall many of the important questions in which our stockmen are interested be investigated or shall they remain unsolved? Both the boys and the farmers of the State are entitled to the recognition of their interests which such appropriation provides and the rapidly increasing revenues of the State will amply justify it.

Then, what of the Experiment Station's work which is now being presented to the farmers of Virginia through Institutes, the press of the State and in every possible way by which its value can be brought to bear on their interests. Development is needed all along the line. We have no poultry department, yet this is one of the leading industries of

the State. Live stock and feeding investigations are very expensive. The question is often raised why more breeding experiments have not been undertaken by the Station, and the answer is simple enough. Money has not been available. All the laboratories of the Station need additional equipment. More workers are needed in some particular lines, especially in agriculture, stock husbandry, chemistry and horticulture. For the definite purpose of extending and developing the Station's work an annual appropriation of \$10,000 is sorely needed. The State of Virginia up to the present time has never made a specific appropriation for the purpose of investigation, and \$10,000 a year is a modest sum to ask for in view of the excellent work the Experiment Station has done during the few years of its existence. The closest scrutiny and investigation will show that the Station, which has hitherto been supported exclusively by Federal funds, has returned with interest a thousandfold all that has been expended on it. The Legislature of Indiana, which recently adjourned, added \$25,000 a year to the permanent income of the State Experiment Station. Our chief interest, like that of Indiana's, centres in agriculture, and the results of investigations at this Station will compare favorably with those obtained elsewhere. Therefore, \$10,000 a year is the least the State can afford to give for the expansion of the Station's work, and it is the very least the farmers of Virginia should be satisfied with in view of the immense benefits that will accrue to them from the feeding investigations now under way, the breeding work with cereals, the cross pollination of varieties of apples, and the studies along dairy and bacteriological lines.

Would this be a wise appropriation to make, and would it be a good investment for the State? Let me answer that in this way. The Station is now engaged in sending out inoculating material for the various leguminous crops. The only charge made is for packing and mailing. It costs the farmers, in other words, 25 cents per acre against \$2 for the commercial form. The Station will this year save in this one item more than \$5,250 to the farmers of Virginia through the distribution of the inoculating material referred to above. It is not often that a State can make an investment of this kind! Yet this is only the beginning. The feeding investigations with beef cattle indicate that shredded stover and silage when judiciously fed with suitable concentrates are as satisfactory forms of roughness for beef cattle as timothy hay, yet silage only costs about \$1.50 a ton and shredded stover from \$2.50 to \$3, whereas hay has a market value of \$10 to \$15 a ton. The farmers of Virginia can thus save thousands of dollars by selling their timothy hay and buying cotton seed meal to replace its fertilizing value and using shredded stover and silage as roughness to fatten their cattle. Virginia farmers purchase about

\$4,000,000 worth of fertilizer a year. If this fertilizer cost on an average \$20 a ton, it is evident that 200,000 tons are purchased. The chemical department has shown that by home mixing the farmers can save anywhere from \$3 to \$5 per ton. Surely an investigation of this kind results in material benefit to land owners. During the present year ten bulletins will be published in editions of 12,000 to 15,000. Between 120,000 and 150,000 pamphlets will be distributed to farmers covering a great variety of subjects, in which they are intensely interested and affording them the only opportunity provided in the State of obtaining useful, practical and scientific data free of cost.

But I must stop for it would take pages to state even concisely the valuable work now in progress in the various departments of the Station for the sole purpose of developing the agricultural interests of the State. Those who will take the time to inform themselves will find that a work of immense value is being done by a lot of hard working, conscientious men whom the people know very little about, and who only ask for good equipment that they may go on and double and treble the value of their researches for the benefit of Virginia farmers.

In conclusion, permit me to say that the College farm is too small for the work expected of it. The State can hardly afford, in my judgment, to lease land for its Agricultural College and Experimental Farm, but this is a matter which should not be urged too strongly at the present time. What the College of Agriculture and Experiment Station need most is funds made available as soon as possible that its various lines of investigation, its teaching work and equipment may be made truly up-to-date, so that the farm boys of Virginia may have the best facilities for gaining an agricultural education, so that short courses in agriculture may be offered to all farmers, young and old alike, who care to avail themselves of the opportunity. There is no longer any question about the value of these short courses nor the importance of scientific agriculture and scientific investigations as related to agricultural progress and the general prosperity of the State. The above plans call for an appropriation of something like \$75,000, but a large per cent. of it would go into permanent equipment or into the furthering of researches that will pay from 100 to 1,000 per cent. on the investment. All that those connected with the College of Agriculture or Experiment Station seek is better facilities to work with, and surely this is a modest request in view of the fact that the State's interest is practically confined to agriculture.

ANDREW M. SOULE.

Virginia Experiment Station.

We invite the special attention of our readers to the foregoing article, and would urge that they should make it a point of duty to bring the same individ-

ually to the attention of the gentlemen seeking to represent them in the State Legislature, and secure from them pledges that they will favorably entertain and support such an appropriation of money by the Legislature as will ensure the full development of the Virginia College of Agriculture and Experiment Station.—Ed.

BEE KEEPING.

Editor Southern Planter:

In the June PLANTER Mr. George Sedivy asked for advice about bees, which the Editor was not able to give, because he had had no practical experience with them, but he suggested that some of his subscribers could give the advice. As I am an amateur bee keeper, every little thing about bees interests me greatly, and I looked through the July PLANTER with more than usual interest to see if some "veteran" bee keeper had not answered Mr. Sedivy's questions on the bee subject, but I found no article on bees.

Mr. Sedivy did not state enough "symptoms" for me to be sure of what caused the loss of his three hives, but I should think that the queens of those hives were poor layers, and did not lay enough eggs during last summer to keep up the population of the colonies, and consequently when winter came on the old, "worn out" bees died off gradually until the colonies were not populous enough to stand the cold "snaps" of late winter and early spring. The fact that the hives contained plenty of honey only goes to show that the queens were poor layers.

Southeast is the proper direction for hives to face, as that is just opposite to the cold northwest winds of the winter.

Three hives out of fifteen is not a very serious loss, if the bees are in modern frame hives, as the loss can easily be replaced by starting nuclei and using the combs of the dead colonies (the combs should be taken care of as soon as it is found that the bees of a colony have perished) in building up the nuclei.

A careful bee keeper should never have any losses. By a "careful" bee keeper I mean one who is up-to-date, knows his business, and does the right thing at the right time.

If a farmer bee keeper is not a "careful" bee keeper he had better get rid of his bees; however, it is a good plan to keep enough colonies to supply honey for his table, as there is no healthier sweet known than honey—good honey. But if a farmer cannot give his bees the attention they actually need—which is a good deal less than any other stock

needs—he had better sell out his bees to some one who will take care of them, as they should be cared for, and buy his table honey.

No apiary, to be run for the money there is in it, should be nearer than three miles to another apiary, run for the same purpose, because the bees would be "trespassing" on each others pasture as they will fly a mile and a half, in all directions, in search of nectar, and it is not at all fair for any bee keeper to let his bees "trespass." Of course, there is no written law for the above, but I think there should be. There is already "said to be" a "moral law to that effect, but I'm sorry to say it is not observed very much.

The Editor must have got hold of some "sassy" bees when he tried bee keeping. I have very little trouble with mine, which are mostly Italians. It is said that Caucasians can be handled, without getting stung, by any person; they are excessive swarmers, though, and it requires expert management to get good crops of honey from excessive swarmers. I will be glad to answer "bee" questions for any one if four cents in postage stamps is enclosed for postage and stationery. I have nothing for sale in this line.

The Apiarist of the Bureau of Entomology, Department of Agriculture, Washington, D. C., will answer any "bee" questions free.

H. C. BARNARD.

Tattnall Co., Ga.

COPPERAS OR VITRIOL AS A WEED KILLER.

Copperas (otherwise called green vitriol or ferrous sulphate) has recently been extensively advertised as a weed killer. Its value for this purpose has been very frequently tested during the past decade, especially in France, Belgium and Great Britain, and also in Canada. It is generally applied in 15 to 20 per cent. solution in water (7 to 9 pounds per barrel) at the rate of 40 to 50 gallons per acre, for the destruction of charlock, wild mustard, and wild radish. To secure good results, the application must be made while these weeds are still young and tender, before the time of blooming. It is much less effective on older plants.

Instead of using the copperas as a spray, the farmers of Belgium spread it, in a dry, finely pulverized state, broadcast, on the ground. The quantity thus applied is from 200 to 300 pounds per acre. Ordinary copperas consists of rather hard, green crystals containing about 45 per cent. of water. On exposure to air, the material gradually loses water, and becomes yellowish or brownish white and powdery. If heated a little above the temperature of boiling water, the entire mass rapidly whitens and crumbles. This

freshly heated, finely powdered sulphate is found to be far superior to the ordinary green crystals for dry application after the Belgian method.

It is not, however, a universal weed killer. It is especially effective for wild charlock, wild mustard and wild radish, but kills wild barley, shepherd's purse, wild buckwheat, ragweed, wall flower, ground ivy, lamb's quarter, and sometimes field poppy, crow foot and cardoon also. Curly dock, black bindweed, sow thistle, groundsel, comfrey, and ægopodium are somewhat injured; and, more rarely, dandelion and English daisy; while smooth-leaved charlock, corn flower, bent grass, couch grass, horse-tail, chamomile, goosefoot, dead nettle, speedwell, spurge and thistles, and often bindweed, field poppies, dandelion and English daisy are entirely uninjured.

The cereal crops are scarcely injured, the edges and tips of the leaves being sometimes slightly browned, but usually recovering fully in a couple of weeks; neither are sugar beet, garden peas, grass, or commonly the legumes seeded with the grain; sometimes, however, very young clover and lupines are slightly injured; while field peas and beans are considerably hurt, and vetches, potatoes, turnips, rape and flax, seriously. Alfalfa is injured, sometimes killed by the dry application.

A sample of "Cereal Weed-killer" made by F. Rosener, Brooklyn, N. Y., has recently been received by the Station. The directions require its use in the dry state, at the rate of 40 to 50 pounds per acre, broadcast on the plants after a strong dew or slight rain. The claim is not made that it will kill all weeds, but that it will destroy most annual weeds, and injure those of longer growth. The presence of a small amount of nitrate of soda was also claimed, to increase the vigor of growth of the cereal crops upon which this weed-killer is applied.

On analysis, the material was found to be ordinary green vitriol deprived of about two-thirds of its water, and finely pulverized. No nitrate of soda was found in this particular sample.

This "weed-killer" may be a desirable article if sold at a reasonable price. It will doubtless prove effective, if used in large enough amount. Belgian experience indicates the need for about five times the quantity recommended in the manufacturer's circular.

Copperas is sold at \$2.75 to \$3.00 per hundred pounds. One hundred pounds of copperas will yield, when suitably heated, about 70 pounds of this finely divided product.

WM. FREAR.

Pennsylvania Experiment Station.

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THE Southern Planter

PUBLISHED BY

THE SOUTHERN PLANTER PUBLISHING CO'Y.,

RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,

Editor and General Manager.

B. MORGAN SHEPHERD,

Business Manager.

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To Advertisers.

Be sure to send in your copy or instructions on or before the 25th of the month for the following month's issue. This is imperative.

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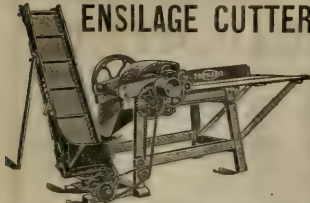
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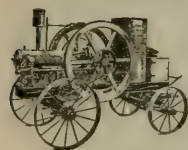


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Guaranteed Tools Remove All Risk of Loss.

It is surprising how careless we are when purchasing something that we know little or nothing about.

Take tools, for instance.

Who can absolutely determine the quality of a hatchet or axe by merely looking at it?

Furthermore, when we buy an ordinary one, it is not ground, and no one knows what flaws or soft spots may develop when we grind it.

When we buy a defective axe, the only recourse known to some of us is to buy another and trust to better luck next time.

The dealer will never guarantee a nameless tool, but will merely say that it is the best he has.

A neighbor may have had an axe that gave perfect satisfaction, but how do we know that another axe of the same make will be as good?

In fact, we are careless.

We say to the dealer, "Give me the best you have," and rely upon him to give us a good one.

Other classes of goods are trade-marked and guaranteed—why not tools?

Thirty-six years ago one concern realized the need of trade-marked tools and perfected a complete line, every one trade-marked "Keen Kutter" and guaranteed. This guarantee authorizes the dealer to refund the money on every unsatisfactory tool, so there is absolutely no risk of defective material.

This naturally means unusual care in their manufacture and excellence of quality that has made "Keen Kutter" tools the standard for the past 36 years, and won for them the Grand Prize at the St. Louis Exposition.

It is now possible to get an entire set of tools marked "Keen Kutter," with the absolute assurance that they will give perfect satisfaction, or the money will be refunded.

This line includes not only edged tools, but tools of all kinds.

If your dealer does not keep them, the Simmons Hardware Co., St. Louis, Mo., and 298 Broadway, New York, will see that you are supplied.

BRASS.

If a man has a cheek of brass, perhaps he can afford to use any old soap for shaving. Most men, however, must steer clear of ordinary soaps, if they wish to shave with ease and safety. Common soap is too harsh for the delicate skin of a man's face. It yields a thin, miserable lather, the razor pulls, and the skin is left sore and rough. Williams' Shaving Soap is made especially for shaving tender faces, and yields a rich, lasting lather, and leaves the skin soft and velvety. As per their offer in another column, the J. B. Williams Co., Glastonbury, Conn., will send you free a trial sample. "Be fair to your face."

EASY WORK

EQUAL TO
TEN MEN

SAFE AND QUICK

**Sweet Fodder
No Ears Lost
write for special price**

FOOS

MFG CO. SPRINGFIELD OHIO

CORN HARVESTER

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Steel Pitless Scale

just out All complete, ready to weigh on except platform plank. No pit. No wall. All steel. New construction. You will like it. We make all kinds of scales. Do you know a good agent for us? Do us and him a favor, show him this ad. We want him Now.

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Built for Business

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Write for catalogue of Engines, Boilers, Saw Mills and Threshers. FREE.

FARQUHAR ENGINES and SAW MILLS

have no superior.

A. B. FARQUHAR Co. Ltd. York, Pa.

THE 4-LEAF CLOVER

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A low wagon at a low price. Handy for the farmer. Will carry a load anywhere a horse can travel.

Low Down Wagons

soon earn their cost on any farm.

Steel Wheels

for farm wagons. Straight or staggered spokes. Any size wanted, any width of tire. Hubs to fit any axle. For catalogue and prices, write to

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The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill made. So complete gearing to get out of order. Boxes are close to ground.

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DEEP WELL DRILLING a specialty. Estimates made free of charge in all localities. If you want any work done write M. S. SCHAILL, Michaux, Va.

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Send cash with order.
STAR PRINTING CO., Millboro Springs, Va.

SENDS WEST FOR STUMP PULLERS.

It seems strange that the timbered East, where all manufacturing industries are so important, should look to the prairie country for stump pulling machines. This is called forcibly to mind by an order recently placed with the Hercules Mfg. Co., of Centerville, Iowa, by E. H. Harriman, the



railway magnate in New York. The order was for a Hercules stump puller, complete with steel cables, improved power pulley and steel grub plow. The outfit was to be put to work on Mr. Harriman's farm at Arden, Orange county, New York.

This is the same stump pulling machinery that is regularly advertised in our columns. The placing of the Harriman order carries its own comment. He is able to afford himself the best, and the order was placed after full investigation by his foreman. There are ample reasons why the Hercules stump pulling machinery is considered the best of its class. A few of the reasons are briefly mentioned in the advertisement. If you have stumpy fields or have clearing to do, it would be a good plan to correspond with the Hercules Company for full particulars. An illustrated circular giving all information will come promptly on request.

LUMBER MAKERS AND WORKERS.

Facilities for manufacture and shipment should count for something with purchasers of machinery. It does count in the case of the American Saw Mill Machinery Company in price, in promptitude, in superior designs, embodying latest improvements, in the grade of materials employed, and in workmanship. Their general offices are in New York City, but their great factories are located some fifty miles out, at Hackettstown, N. J., right in the centre of the coal, iron, steel, lumber, and labor markets of the country. Their factory is probably the largest and best appointed and best equipped of any in the country. Their shipping facilities, too, both for domestic and foreign trade, are unsurpassed. All of these things are happily combined to produce the goodly reputation which the American Saw Mill enjoys. The concern manufactures more than saw mills. The line includes practically all kinds of improved wood-working machinery, such as Shingle and Lath Machines, Edgers, Trimmers, Saw Mill Appliances, etc., etc. Readers of this paper who are buyers of any of the above machinery cannot do better than get in touch with the American line. We number the company among our valued advertising patrons. For address and catalogue, note their announcement elsewhere.

THIS IS IT



ELECTRIC

The wagon you are looking for: the wagon folks are all talking about. By every test it is the best—no living man can build a better. Of course you have guessed that it's the

ELECTRIC HANDY WAGON

Low steel wheels: wide tires and durability and good service written all over it. Don't be talked into buying an inferior. Get the wagon that lasts. Or we'll sell you a set of Electric Steel Wheels



and make your old wagon new at slight expense. Spokes united with the hub, absolutely impossible to work loose. Sold on a money-back guarantee. Their saving in time, labor, horse flesh and repair bills will pay for them in a single year. More than a million and a quarter in use. All we ask is a chance to tell you more about them. Drop us a line, we'll do the rest. Catalog free. ELECTRIC WHEEL CO., Box 148 Quincy, Ill.

The Dairy Problem Solved, and Solved Rightly.

Since man first began to milk cows, the problem of how to make the most dollars from them has been up for solving. After centuries of experiment the way has been discovered.

An Easy Running Empire Cream Separator

will get these dollars for the cow-owner, and will get them all. This is no experiment; it is an actual fact proven by years of experience by farmers the country over.

You want to know why; we want to tell you why. Write, and get our free books on dairying. Read these; then investigate the Empire. The result can only be one thing, a complete proof that our statements are true. Empire Cream Separator Co., Bloomfield, N. J. Creamery Churn Mfrs., Agents, Louisville, Ky.

WE'LL PAY THE FREIGHT and send 4 Buggy Wheels, Steel Tire one, \$7.25 With Rubber Tires, \$15.00, 1 tire wheel \$4 to 4 in. tread. Top Buggies, \$28.75; Barnes, \$3.60. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. W V BOOB, Cincinnati, O.

WARRIERS CHAIN HANGING STANCHION

CLEAN SAFE, DURABLE AND COMFORTABLE
WALLACE B. CRUMB, FORESTVILLE, CONN.
P. O. BOX 449

FARMERS' TELEPHONE.

A farmer's telephone system comprising several thousand telephones in itself, and giving free connection with more than as many more, and long distance connection with all parts of the United States all for a first cost of less than \$25 and an after annual expenditure of less than \$5 is what the farmers of Rockingham county, Virginia, have; and in order that the farmers of other communities may have the benefit of this most successful experiment with the mutual idea as applied to telephones, I shall write of it briefly, giving the history of its organization and development at as much length as limited space will allow.

Back in the middle nineties a joint stock telephone company operated in this county, and dominated the telephone situation. The rates were so high that comparatively few farmers had telephones. By and by the farmers living along the Rawley Springs Turnpike began to agitate the question of a neighborhood telephone system of their own. They finally met together, 36 of them, and decided to build the line. This involved the building of twelve miles of main line, besides several miles of side lines. They built it, using only the best poles and wire, one end terminating at the county seat, where arrangements had been made for the installation of a phone to deliver whatever messages might come there. Then a test was made of all the standard makes of telephones, and one of the multiple bridged type was adopted, as best suited to the requirements of a rural service. Although poles of sufficient size to carry ten wires were put up, and one four wire cross arm put on, it was found that the entire expense involved was less than \$25 to a man, including the cost of his telephone. The actual cash outlay was less than this as much of it was represented by labor, hauling and material. After the line was in operation the farmers of other communities were invited to come and try it and inspect it with a view to having other communities go and do likewise. One by one these communities did follow their example, until, within a few months six or more of the principal sections of the county had little independent companies of their own. Then a meeting of all the phone holders of the different little companies was called to perfect a general organization. This organization provided that each little company should be independent in all matters affecting themselves alone but that the general affairs of them all were to be administered by the new organization, each little company bearing the same relation to the central organization that the State governments bear to the Federal Government. The new organization, which was afterward incorporated, made a contract with a responsible party at the county seat to furnish them an exchange service at



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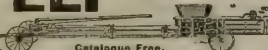
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BALE YOUR OWN HAY.
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WITH A "HANDY" BALER
THE STRONGEST, MOST POWERFUL,
SWIFTEST AND LIGHTEST
OPERATING HAND PRESS
EVER PUT ON THE
MARKET.

UNIFORM BALES
STANDARD SIZE
EITHER LIGHT OR HEAVY
**LITTLE GIANT
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DALLAS, TEXAS.
WRITE FOR PARTICULARS
CATALOG AND HANDCROSS
POWER DRIVEN PRESS.

"ELI" HAY PRESS.



Catalogue Free.

One horse equals two on other presses. Leads in speed, clean work and right working. Self Feed. Large Feed Opening. Mouldern. Many styles horse and power presses.

Collins Plow Co., 1185 Hampshire St., Quincy, Ill.

BALES 15 TONS
A DAY HAY

Our catalogue gives valuable pointers about Press construction and operation. Our 37 years' experience make the Gen and Victor Presses most durable, easily operated and least expensive. Send postal for book. GEO. BREYER CO., Quincy, Ill.

Clark's Tools for Large Hay Crops



Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the subsoil water. It is an excellent machine for covering in sugar cane. Strength guaranteed.

Can plow a newly cut forest, stump, bush, or bog land; leaves land true, clean for any crop.

Clark's Double Action Cutaway Harrow moves 15,000 tons of earth in a day.

Send for Circulars.

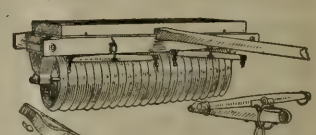


Clark's Rev. Sulky Disc Plow

Made single or double. One or two furrows 16 to ten inches deep; 14 inches wide. For two or four horses. Light draft. No extra draft. No similar plow made. When Clark's grass tools are used as directed in his grass circular, we, the C. H. Co., guarantee them to kill wild mustard, charlock, hard hack, sunflower, milk weed, morning glory, Russian thistle or any other hard plant that grows, or money refunded. Now is the time to commence work for next year's seeding to grass.

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THE CAMBRIDGE

Corrugated Land
Roller and Pulverizer

THE BEST IN THE WORLD.

Address R. F. HARRIS & CO., Charlottesville, Va.

Imperial Pulverizer, Clod



Crusher & Roller.

Leads them all.

Send for The Peterson M'fg Co., Kent, O. Circulars. We also manufacture old reliable Rice Heaters.

Save The Posts

Old field pine made to last longer than cedar or locust by creosoting with dead oil of coal tar. The creosoting of lumber makes it practically indestructible, stops all rot and is absolute death to all insects. Write for prices to the NORFOLK CREOSOTING CO., Norfolk, Va."

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Axle Grease

Best in the world. Its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand. Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.

DID IT EVER OCCUR TO YOU

that an artesian well is the absolutely sure source of pure, clear, cool water

AND

that we make a specialty of drilling them and furnishing all kinds of Pumping and Water Supply Plants, Complete? Our long experience will put money in your pocket.

TANKS, PUMPS, WIND MILLS, Wood Saw Tables, RAMS.

Sydnor Pump & Well Co.,
(INCORPORATED.)
Box 949. Richmond, Va.

SPECIAL.

All who desire to keep consumption from their homes, children or friends, or have care of those already afflicted. should write for free directions to the

**Virginia Sanatorium for
Consumptives,
Ironville, Virginia.**

A benevolent institution for care of the poor consumptive and for the protection of the community.

All are invited to membership.

a cost of three dollars a year per phone. He equipped a central office, and to this day continues the contract. The service is being constantly improved, until to-day it is pronounced the best rural system in the United States. In some of the little community companies the new accessions, who pay at the same rate as those who first entered the system, have been sufficient to keep enough money in their treasuries to meet all expenses up to this time. But there will be but very little growth from this on, as practically every farm house in the county has its telephone. In the community in which I live we had three wires and 36 phones to start with; now we have ten wires and 100 phones. As these are all along the turnpike, most of the farmers have little switches by which they can connect themselves with every phone in the community without going through central.

I have some copies of the constitution and by-laws of the Rockingham Mutual Telephone System, and I will be pleased to mail a copy to any one who is really desirous of investigating the matter further. If this article gives rise to any question of general interest I will be glad to answer them through this paper.

W. J. SHOWALTER.

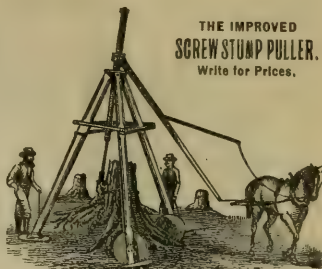
Dale Enterprise, Va.

**BIG STOCK SHOW IN SEPTEMBER
AT LEWIS AND CLARK EXPOSITION,
PORTLAND, ORE.**

"You can say without any hesitation that the stock show at the Lewis and Clark Exposition will be a good one," is the way M. D. Wisdom, superintendent of livestock for the Western World's Fair, explains the situation with regard to his department. "It will be the biggest show ever held in the West," Mr. Wisdom adds, "and will compare favorably with the other big shows of the kind which have been held in connection with exhibitions."

The stock show dates are from September 19th to 29th, inclusive. In the neighborhood of \$50,000 in prize-money is now available as an incentive to stockmen to attend the show and exhibit their stock at the Exposition, but this, according to Mr. Wisdom, is not responsible for the very unusual interest which breeders and dealers all over the United States have taken in it. The big dealers are going to exhibit at Portland because they believe that the stock business in the Pacific Northwest has a great future, and that no better opportunity than the Lewis and Clark Exposition could be found for introducing their breeds to the Western market. Several firms are making arrangements to open branch houses in the Pacific Northwest, and already one—McLoughlin Brothers, of Kansas City, Mo., and Columbia, O.—has decided to establish a branch in Portland. W. E. BRINDLEY.

THE IMPROVED
SCREW STUMP PULLER.
Write for Prices.



Chamberlin M'g Co., Olean, N. Y., U. S. A.

HERCULES Stump Puller



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 feet without moving or changing machine. Strongest, most rapid working and best made.

HERCULES MFG. CO.,
413 17th St., Centreville, Iowa.



The Monarch Stump Puller.

The best on earth; you make no mistake in buying of a man of 5 years' experience in pulling stumps. We set up the Puller and guarantee satisfaction before we want your money. 5 sizes.

Write for catalogue and prices.
JOS. W. RITCHIE, State Agent, R. F. D. No. 39, Grottoes, Va.

STUMP PULLERS
SEVEN SIZES
\$17.50 UP
DEPT. F. W. SMITH GRUBBER CO. LACROSSE WIS

SAN JOSE SCALE
and other INSECTS killed by
GOOD'S

Caustic Potash Whale-Oil Soap No. 3

Endorsed by U. S. Dept. of Agri. and State Experiment Stations. This soap is a Fertilizer as well as an insecticide. 50-lb. cans, \$2.50; 10-lb. cans, \$1.00; half barrel, \$2.00; 5-lb. per lb. barrel, \$2.00. Send for sample.
JAMES GOOD, Original Maker,
929-41 N. Front Street, Philadelphia, Pa.

Stubbhorn Skin Diseases.

Dr. C. I. S. Cawthon, Andalusia, Ala., declares "Tetterine is superior to any remedy known to me for eczema and stubborn skin diseases." Many other physicians unite in this testimony. It has accomplished wonders in their practice. It is amazing that any one would suffer with itching, burning skin diseases when relief might be had infallibly from the use of a 30-cent box of Tetterine. Your druggist or by mail from the manufacturer, J. T. Shuptrine, Savannah, Ga.
Tetterine Soap, only 25c. cake.

Mention THE SOUTHERN PLANTER in writing.



**THE
MAJESTIC**

ROTARY WASHER
A HOUSEHOLD NECESSITY.


BECAUSE:
It is the best WASHER on earth.
It's Ball-bearing, and almost runs itself.
It is made of white cedar, with electrically welded hoops sunk in the wood-wood.
We are the largest manufacturers of woodenware in the World, and can make the BEST; "HEAPEST."
WRITE FOR CATALOGUE.

The Richmond Cedar Works.
Richmond, Va.

WIRE-\$1.40 Per 100 Lbs.

Standard galvanized wire, put up 100 lbs. to a bale, lengths running up to 200 ft. No. 14 fence, per 100 lbs. \$1.40. Write for prices on other gauges. Fence staples, per 100 lbs. \$2.00. Wire nails, mixed in a box, per 100 lbs. \$1.50. Barbed wire, per 100 lbs. \$2.35. Poultry netting, steel fence, etc., at low prices. Ask for Catalogue A, or 100 on merchandise of all kinds from Sherline's and Receiver's Store, Chicago.

CHICAGO HOUSE WIREING CO., West 25th & Iron St., Chicago



FENCE YOUR FARM
With "Jones' Fences."
Use "Jones' Gates." They will give most satisfaction and a better looking job than any other fence made. Strong, durable and easy to put up. Write for catalog No. 3 and prices.
International Fence Co.
Agents Wanted
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EVEN HEAVY STOCK
Can't break over poultry if enclosed with Page Fence. It's made of the same strong quality of galvanized wire and woven in the same manner as Page Stock Fences. Height 4 or 6 feet. Bottom mesh only 1 1/2 inches.
PAGE WOVEN WIRE FENCE CO.
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Wire Fence 29c
4-in. stock fence per foot only.
Best high quality wire used. Strong wire, built to last. Free and easy to put up. Write for it at once.
MASON FENCE CO. Box 80 Leeburg, O.



IRON FENCE
LOW PRICE HIGH GRADE
CATALOGUE FREE.
DOW WIRE & IRON WKS. LOUISVILLE, KY.

Always mention the Southern Planter when writing advertisers.

SOUTHERN POETS—No. 8.

Mary Washington.

Charles Hamilton Hayne was born at Paulston, S. C., January 1, 1831. He was the son of Lieutenant Hayne, of the United States Navy, and nephew of the distinguished statesman, Governor R. Y. Hayne. He was educated at Charleston. He was a frequent contributor to "The Southern Literary Messenger."

In 1855 he published a volume of poems in Boston, the subject of them being "The Temptation of Venus."

In 1857 he published a volume of sonnets and other poems.

Again, in 1860, he published in Boston a volume containing "Avolo," "Legend of the Island of Cos," with other poems lyrical, dramatic, and miscellaneous.

His long poems (narratives in verse) are not his best, but are sometimes obscure and tedious. He prides himself especially on his sonnets, but neither are they his best form of art. He excels in lyrics.

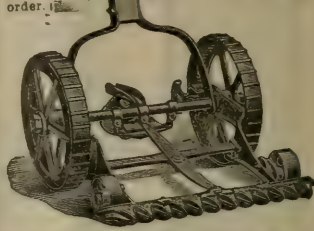
Hayne has intense love of nature, rich imagination, and a true sense of the music of words. He is musical and dainty in phraseology, though sometimes a little affected. His poetry is alive with passion and with tropical wealth of emotion. He is singularly well versed in English literature, back to and including the Elizabethan era. His study of Tennyson is in the spirit of a true artist. His ode before the Carolina Art Association, a carefully elaborated poem of nine pages, is very fine, and is considered his best by some critics. His ode to sleep has been much admired, both in this country and Europe; so we see that Shakspeare and Keats (great as they were) did not have the last word on the subject of sleep. Hayne's sonnet on October is also very good. Gems of his genius are to be found in his miscellaneous poems. "The Village Beauty" is a very good illustration of his style. Some of his dramatic sketches are spirited, and indicate talent in that line. He wrote frequent poems during the war—spirited war cries—some of them of the blood-and-thunder order, as "The Black Flag." These poems were reprinted in Simms' "War Poetry of the South." Since then he has published "Legends of Lyrics" (1872), edited a complete memorial edition of Timrod's poems in 1873, adding a sketch of the author's life, and has published a good many short poems in periodicals. He died in July, 1886, whilst still in the prime of his life.

One beautiful and interesting feature in Hayne's life and character was his strong friendship for other men of genius, and his warm, unstinted appreciation of their gifts. He had none of the narrow envy or jealousy which one artist will sometimes evince to friends another. He was a staunch friend both to Timrod and Lanier, both of whom by a strange and sad coincidence died of consumption before reaching middle age. In the published

Clipper Lawn Mowers

WILL cut short grass, tall grass and weeds. If your dealers have not them, here is the price. Send order or money order.

No. 1—12 in. \$5.00
No. 2—15 in. \$6.00
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CLIPPER LAWN MOWER CO., Dixon, Ill.

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DO YOU EVER INTEND TO BUY A PIANO? If so, read this and buy now. Never before have you had as fine an opportunity to buy a fine piano at such a great sacrifice of price. We are to take inventory and must reduce our immense stock. Here is your life's chance. Look at these prices:

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A fine \$450 upright.....	\$22.50
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Square pianos at your own prices from \$20 to \$100. Organs from \$20 to \$55. Write us to-day for full information and catalogue.

WALTER D. MOSES & CO.,
103 E. Broad street, Richmond, Va.
ESTABLISHED 1870.

Oldest Music House in Virginia.

Make Your Idle Money Earn You Interest.

Write the **FIRST NATIONAL BANK OF RICHMOND, VIRGINIA** for information concerning its certificate of deposit, so arranged that one per cent. may be collected every **FOUR MONTHS** through your nearest bank or store.

Our experience proves this form for savings to be the most satisfactory plan yet devised for deposits of \$100.00 or more.

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Complete fertilizers, rich in **POTASH**, produce strong stalks (making lodging impossible) and full plump grain, rich in starch and of good milling quality.

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Chincha:	Lime.....	Lobos:
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20.50 per cent.	Bone Phos....	50.00 per cent.
8.50 per cent.	Ammonia....	3.50 per cent.
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9.00 per cent.	Phos. Acid.	23.00 per cent.
Organic Matter and Ammonia Salts		
28.00 per cent.		13.00 per cent.

Inquire of your DEALER; if he has not got it, write to

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Chemical Analyses

of MINERALS, FEEDING MATERIALS, WATER and other products made at reasonable rates. Correspondence solicited. J. B. WEEMS, Ph. D., Crewe, Va., Expert in Agricultural and Industrial Chemistry.

BAGS

FOR EVERYTHING;
NEW OR SECOND-HAND;
SOLD OR RENTED.

Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.

volume of Lanier's beautiful and soulful letters (almost equal to his poems), we find a number addressed to Hayne, and expressing the highest praise of the latter's poetry. Acting on the principle of letting a man be judged by his peers, we might do well to take Lanier as literary judge and jury in the case of Hayne. According to Lanier, "Fire Pictures" is the finest of Hayne's poems—full of "pure fire and rare flame-beauty." In a letter addressed to Hayne on the subject, in 1871, he says, after first pointing out some trivial defects in the poem: "And now when I commence to tell you of the charm your poem has for me, I am greatly at a loss where to begin, and wholly at a loss where to end. "Backward o'er its river courses, Backward to its mountain sources, While the blood-red sunset burneth Like a God's face, grand with ire," is too beautiful, and one can say nothing about it better than to quote it."

* * * * *
And next comes the (me judice) glory and fair climax of the poem—the sweetest notes, to my mind, and the fullest of genuine poet's music that you have ever sung. I mean

"Fairly flowing
Like a rivulet rippling deep,
Through the meadow lands of sleep,
Bordered where its music swells
By the languid Lotos-bells
And the twilight asphodels;
Mingled with a richer boon
Of queen lilies, each a moon,
Orbed into white completeness.
O the perfume and the sweetness
Of those grouped and fairy flowers,
Over which the love lorn hours
Linger,—not alone for them
Tho' the Lotos swings its stem,
With a lulling stir of leaves,
Tho' the lady-lily laves
Coy feet in the crystal waves,
And a silvery underturn
From some mystic wind song grieves,
Dainty sweet amid the bells
Of the twilight asphodels—
But because a charm more rare
Glorifies the mellow air
In the gleam of lifted eyes;
In the tranquil ecstasies
Of two lovers, leaf embowered lounging there,
Each of whose fair lives hath flowered

Like the lily petals finely,
Like the asphodels divinely."
"I am quite in friendly earnest—and you know I love music—when I tell you, dear Mr. Hayne, that I do not know of anything, of the same style, in our language, which is so beautiful as this passage. The flow of the melody is unbrokenly perfect, and the interfusing of the exquisite nature picture with the one-passion of two human hearts makes an inner music dwelling in the material music which enchants me beyond measure. Nothing you have ever done has pleased me so entirely, and I believe the verdict of after-poets will support me."

In a later letter (May 26, 1873)



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50 Cts. Per Bag.

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CHESTER, VA.

ORGANIZED JANUARY 9, 1899.

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Prices reasonable. G. F. POINDESTER,
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STEPHENS, Cambria, Va.

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J. F. JONES, Manager.

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W. GROSSMAN, Petersburg, Va.

FARM TELEPHONES

How to put them up—what they cost—
why they save you money—all in-
formation and valuable book free.
Write to J. Andrae & Sons, 934 W.
Water St., Milwaukee Wis.

Lanier, after praising highly Hayne's
poem on violets, asks: "Are you, by
the way, a musician? Strange that I
have never before asked this question,
when so much of my own life consists
of music. . . . The very deapest of
my life has been filled with music,
which I have studied and cultivated
far more than poetry. I only mention
this in order that you may understand
the delight your poetry gives me. It
is so rarely musical, so melodiously
pure and silvery in flow. It occupies
in poetry the place of Mendelssohn in
music, or of Franz Abt or Schubert.
It is in this respect simply unique in
modern poetry. William Morris comes
nearest to it, but he lives too closely
within hearing of Tennyson to write
unbroken music, for Tennyson (let me
not blaspheme against the gods) is not
a musical, though in other respects,
particularly in that of phrase-making,
a very wonderful writer."

A year later (May, 1874), Lanier
writes to Hayne: "My brother has just
sent me your 'Cloud-Star,' which he
clipped from some paper. I am
charmed with it, and am not sure but
I shall presently come to think it the
strongest thing you have done. To
die, consumed by these heavenly
fires—that is infinitely better than to
live the tepid lives and love the tepid
loves that belong to the lower planes
of activity. . . . Is not this the secret
that lies hid in the bosom of this rose
or a poem?"

I have quoted thus freely from
Lanier partly because he is a critic
of such great insight and discrimina-
tion, and partly because it is so pleas-
ant to see one man of genius accord
such wholesome recognition to an-
other. This spirit also characterized
Hayne as strongly as it did Lanier.

South Carolina has been peculiarly
rich in poets. Something in her at-
mosphere seems to foster the poetic
principle, and in Timrod and Hayne
her poetry has reached its highest de-
velopment.

WASHINGTON NOTES.

Nine little stories for farmers are
about to be issued by the Department
of Agriculture as Farmers' Bulletin,
No. 227, a collection of Practical Farm
Experiments.

Extension of the Corn-Growing Area
shows that the corn crop is invading
some of the States where it had been
supposed that corn could not be grown
well. It is rather surprising to find
that Montana, for instance, while it
does not grow very much corn, gets a
bigger yield per acre than three-
fourths of the other States.

Peanuts for Forage is rather inter-
esting reading. The peanut is one of
the most valuable of the legumes—a
cousin to the clover—and the crop,
while a money-maker both for the pean-
uts and for forage, constantly im-
proves the soil. The Arkansas Station
produced 143 bushels to the acre.

The Winter Killing of Fruit Trees
is a refreshing romance, bringing to

Men Wanted

I desire immediate correspondence with
5 young men for farm work, 5 for carpen-
ter work, 2 for brick and rock work, 2 for
plastering, 2 for painting, 2 for printing
office, and 2 for stock, poultry and dairy
work, who will take pay in board and
tuition at Central Academy. Address M.
W. HESTER, Principal, Littleton, N. C.

Partner Wanted

with \$500 or \$1,000 capital to invest in a
first class, up-to-date Cotton Gin and Grist
Mill with Gasoline Engine; all in perfect
order; good building; can get all the cot-
ton wanted. W. H. WILSON, St. Brides,
Va.

WANTED

An intelligent, practical farmer to take
charge of my farm on the Eastern Shore
of Maryland; all buildings perfectly new.
M. R. VAN HOOSE, Princess Anne, Md.

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FARM FOREMAN

WANTED—Single man preferred. Must be
able to superintend all farm work. Ad-
dress, stating age, references, etc., to O. K.,
care Southern Planter.

WANTED

FOREMAN for Stud Farm, married man
preferred. Must be experienced with sta-
tions, brood mares, etc. Address, stating
age, references, etc., STUD FARM, care of
Southern Planter.

Experienced Dairyman

Would accept responsible position in one
of the Southern States. Single and sober.
Address DAIRYMAN, Box 9, Gladwyne, Pa.

WANTED

by January 1st an all-round man to take
charge of good James River stock farm on
shares. Must be married and willing to
work. Address C, care Southern Planter.

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Wanted for large farm; man with boy old
enough to work preferred; good salary to
capable man; reference required. Address
DR. OWSLEY, Greenwood, Va.

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River low grounds, desires position on some
place which is not for sale. FARMER, care
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WANTED

For my Dairy an honest young man. Must
be a good milker. F. W. MEYER, Norfolk,
Va.

WILL PAY \$10.00 PER WEEK.
to farmers, their wives, sons or daughters
for portion of their time. J. T. FLOURNOY,
Jersey City, N. J.

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The J. B. Williams Co., Glastonbury, Conn.

Wanted for 1906

A good renter or share tenant, one who can raise large crops of shipping tobacco; good land and good conveniences. W. M. WATKINS Saxe, Va.

FIRST CLASS

FARM HAND

and a good handler of draft horses, wanted. Steady employment at good wages for the right man. F. L. J., care Southern Planter.

Position Wanted

By an experienced and up-to-date farmer as manager of a large estate; best references. Address "PLANTER," Elk Hill, Va.

WANTED

a copy of Edmund Ruffin's book on Calcareous Manures. Would also like any other of his books on agricultural subjects. In writing state condition of book, together with price. Address C. B. CHAPMAN, Madison, Wis.

THE CHICK BOOK

"From the breeding pen through the shell to maturity."

Contains the experience of the world's leading poultrymen, and all the latest and most trustworthy information about hatching, rearing, fattening and marketing chickens. Price, 50c. THE SOUTHERN PLANTER, Richmond, Va.

"Feeds and Feeding"

Prof. Henry's Great Book for Farmers and Stockmen.

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mind, during the sweltering days of summer, sharp, snappy mornings in December and nice snow-drifts.

Corn grown in the orchard is considered one of the best possible crops, and dressings of barnyard manure tend to prevent trees from freezing.

A short treatise on Cranberry Culture is recommended for those who live in swamps.

The Lime-Sulphur-Salt, which is described in Little Story, Number 6, is the insecticide which in one form or another has for years been relied upon by the fruit-growers of the Pacific Coast States in combatting San Jose scale and other scale insects. The various formulas are given, and the possibility has been demonstrated of keeping this insect in check by an occasional treatment. The materials for the washes are not costly, can be obtained anywhere, and are easily prepared and applied.

The next short classic is Destroying Prairie Dogs, a description of a treatment of considerable value to the Western States, but of little interest to the farmers of Boston.

Next in this series comes Clean Milk, something which we all agree should be the rule, but which the people of the Department of Agriculture say is a condition more often observed in the breach than the observance. Here are a few homely suggestions:

Keep the cows clean and do not compel them to wade and live in filth.

Stop the dirty practice known as "wetting the teats"—drawing a little milk into the hands before and during milking, leaving the excess of filthy milk to drop into the pail.

Expose pans to the direct sunlight, which is a good sterilizer.

Keep out of milk pans, cans, etc., all sour milk. Using them for this purpose infects them so badly that no amount of washing is likely to clean them. Bacteria are invisible, and millions can find lodging in the thin film of moisture that remains after dishes are apparently clean.

Whitewash the barn at least once a year.

The last of the series is a short essay on the Construction and Ventilation of Poultry Houses, compiled from a number of American and English bulletins and journals. The idea here set forth is that if eggs are to be obtained from hens during the season when eggs are high, the hens must not be allowed to shift for themselves. No animal responds more quickly or steadily than the hen to good treatment and good food, and while she is probably the most wonderful piece of farm machinery to be found, she cannot well be expected to grind out eggs the year around without a good house, a clean floor, a comfortable sleeping place, and good food.

Quarantine for Goats.

The Bureau of Animal Industry is in earnest in its intention to introduce European high-bred milch goats into this country for the purpose of cross-

Va. Polytechnic Institute

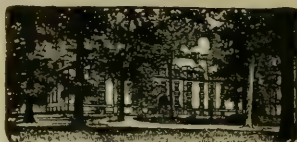
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Total cost of session of nine months, including tuition and other fees, board, washing, text-books, uniform, medical attendance, etc., \$240.00. Cost to State students, \$200.00. For catalogue and other information, apply to J. M. McBRIDE, Ph. D., LL. D., Pres.



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Delightful climate; beautiful suburban location; new fireproof buildings. University-trained, experienced teachers; reputation for thorough work, good health, fine table-board. Catalog free.
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I can furnish a few more colonies of pure Italians at \$5 per colony, in complete hives, nearly full of honey. A wise man is always on the look out for such bargains.

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with improvements. Much land now being worked has paid a profit greater than the purchase price the first year. Long Summers, mild Winters. Best shipping facilities to great eastern markets at lowest rates. Best church, school and social advantages. For list of farms, excursion rates, and what others have accomplished, write to-day to

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Roanoke, Va., Dept. Y.



ing them on common American nannies. Purchases have been made of specimens of Swiss and French goats which are heavy milkers, and to receive the shipment the Department of Agriculture has bought a small island in New York harbor for quarantine purposes, as it is of course important to introduce and breed from goats which are free from any of the contagious diseases which are found more or less in the herds of all European countries. Much interest is manifested throughout various parts of the United States where goats are raised to some extent, and a large number of individuals who have milch goats of good frames, but which give only a small amount of milk, are anxious to secure the assistance of the government in improving their flocks and gradually building up a strain of milch goats.

New Farm Bulletins.

Some of the most popular farmers' bulletins of the Department of Agriculture which have recently been brought up to date and reprinted, owing to the exhaustion of the previous stock, are

No. 51—Standard Varieties of Chickens.

No. 57—Butter Making on the Farm.

No. 59—Bee Keeping.

No. 112—Bread, and the Principles of Bread Making.

No. 175—Home Manufacture and Use of Unfermented Grape Juice.

No. 208—Varieties of Fruit Recommended for Planting.

No. 214—Beneficial Bacteria for Leguminous Crops.

Several of these are quite timely. They can be had without cost upon applications to members of Congress or to the Secretary of Agriculture.

Maple Sugar.

The Maple Sugar Industry is an interesting bulletin (No. 59, Bureau of Forestry), prepared by William F. Fox and William F. Hubbard and containing also a discussion of the adulteration of maple sugar by Chemist Wiley.

The Bureau of Soils is getting out its advance sheets of field operations in different parts of the country, showing its system of underground surveys.

Reports indicate that Texas fever has been sweeping the Indian Territory, and, according to a government inspector, more than 5,000 cattle have died in the Chickasaw Nation alone during two weeks. Many of these Indian lands are leased to white cattlemen, and the loss in live stock will, it is feared, run into the millions before the fever can be stamped out. Whole herds are infected.

This is, however, below the quarantine line, and serious outbreaks are the usual thing at this season of the year. The quarantine of the Department of Agriculture is being effectively maintained, and no fear of the spread of the contagion above the line is entertained. GEO. E. MITCHELL.

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I wish to buy a farm of 100 or 125 acres, suitable for a dairy farm within seven miles of Richmond, and on the north side of the James river. Address J., Southern Planter, Richmond, Va.

To Exchange

56 acres of fine Timberland in North Carolina, for sawed lumber. HALL & JEHNE, Farmville, Va.

Valuable Stock Farm FOR SALE

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Also a 136 acre farm suitable for trucking and general farming near city limits; new buildings. W. H. BUFFKIN, Elizabeth City, N. C.

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40 acres, 4 miles from Charlottesville, 1 mile from church, school and railroad station; new 5 room house, with large porch, well and spring near house; new barn 20x30; corn house; young orchard; large shaded lawn. Land mostly level; 30 acres in high state of cultivation; 10 acres in timber; suitable for trucking or poultry. Address OWNER, Box 3, Rio, Va.

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Hotel and Resort situations, overlooking Bay and Ocean, on line of Old Dominion S. S. Co. B. C. FOSTER, Selling Agent, Cardinal, Va.

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Where Health, Climate, Soil, Location and markets are unsurpassed. Any size, place and price to suit the buyer of a stock, truck, fruit, poultry or fish and oyster farm. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 36 P. pamphlet giving full particulars.

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Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

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No. 40.—133 acres; one mile from town, on fine Macadam road. Nice 7 room house, 3 porches. Good well and springs. Good barn, with stalls for 10 cows and 5 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land sandy loam and clay. Two acres in orchard; trees in full bearing. Price, \$6,000.

No. 41.—26 acres; 10 miles from Washington, D. C.; 2 miles from an electric and steam road. Thirteen room house in nice shaded lawn, 2 cellars, well at house. Nice orchard, in full bearing. All necessary out-buildings in good repair. Price, \$3,600.

No. 43.—30 acres; an elegant brown stone house, with 5 rooms, 2 porches. Three acres private orchard, in full bearing. Necessary out-buildings, in good repair. A large stone mill building, with 2 sets of corn burrs, has 20 cent water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$3,200.

No. 47.—100 acres; 2 1/2 miles from railroad; 50 acres cleared, all level and in fine state of cultivation. New 5 room house. Stable for 4 horses and 6 cows. Young orchard. Good well at house. Situated on popular dirt pike, in Loudoun county. Price, \$2,600.

No. 50.—40 acres in Loudoun county, in the best grazing section of the State, all in grass; 12 room residence, situated on elevated ground in a large shaded lawn. An elegant large orchard in full bearing. Stabling for 60 cattle, farm grazed and fattened 65 export cattle last season. Well fenced, and an abundance of running water. Price, \$44,000 per acre.

No. 62.—636 acres excellent grazing, cleared land, well set in grass, and a little rolling; 260 acres fine white oak timber, balance of land cleared. Nine room house, bank barn 30x40, sheep house 20x50, and all the usual farm buildings, all in good repair. Large orchard of all kinds of fruit, in full bearing. Farm watered by springs and streams; water in all the fields; land is all well fenced; has now about 40 large cattle. In addition to sheep, horses and colts. Price, \$16,000 per acre. Easy terms.

No. 63.—516 acres, natural Blue Grass land; well fenced; elegant well equipped. Good 5 room house, with all the necessary small farm houses in good repair; good sheep barn 30x40. Thrifty young orchard of apples, peaches, pears and cherries. Land is all in grass except about 40 acres that is in corn now. Close to schools, church, mill and post-office. Four miles from railroad. This farm usually sends off from forty to fifty export cattle in September. It is located in the most fruitful section of the county of Loudoun, 25 miles from Washington, D. C. Price, \$15,000 per acre; one-third cash.

No. 73.—Contains 25 acres, 1 1/2 miles from station. In Loudoun county, divided into three fields; land is smooth and level and well improved; about 100 fruit trees—apples, peaches—in full bearing. A good 4-room dwelling, barn 20x30, stable and other small outbuildings—all in good repair. Located on good road; half mile to school, church and post-office. Price, \$850.

No. 66.—Large merchant mill, new process, all modern improved machinery, cost about \$14,000, situated in one of the finest grain sections of Northern Virginia, two and one-half miles from railroad. Ample water power in ordinary seasons, but fitted up with a splendid boiler and engine to aid power in the event of a drought. For sale to settle an estate. Write for full description. Price, \$7,500.00, on very easy terms.

Write for full information and price list of other farms.

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WITH THE ADVERTISERS.

The Brown Fence & Wire Co. starts the season's advertising with an attractive card on another page.

Parties desiring to secure Patents will do well to correspond with Chandler & Chandler.

The Fellsworth Lime Works are advertising Agricultural and Builders' Lime.

Finely-Bred Barred Plymouth Rocks are offered by Mr. L. W. Walsh.

Pure-Bred and Grade Herefords are offered by Dr. W. C. Stubbs.

A couple of nice Shorthorn Bulls can be had at low prices from Mr. I. S. Eberly.

Mr. J. E. Thomasson has three ads in this issue to which we invite attention. His offerings are a Virginia-bred Jack, Duroc and O. I. C. Pigs and Bees and supplies.

Mr. J. F. Durette has a very liberal Poland China offer on another page.

The Oconeechee Farm is offering some nice Poland China Hogs and Buff Orpington Fowls.

The Rockbridge Lime & Stone Co. has an attractive announcement in regard to its Patented Process Lime.

Thomas Basic Slag is offered by A. S. Lee & Son Co. in a full-page ad elsewhere in this issue.

Mr. J. B. Gray starts the season's advertising with this issue. His Poland Chinas are well known to scores of our readers.

GOOD HOUSEKEEPING.

To Keep Butter.

With proper treatment, butter can be stored at any season of the year so as to be almost as good as fresh when needed. On the small farm, where only a few cows are kept, it is impossible to churn cream entirely, but we all know that butter made from cream is far better than that made when milk is churned. In the first place, it is very important that the milk should not be turned too hard, or be overheated in the turning. The butter should be taken from the churn as soon as it can be gathered and washed thoroughly until there is no milky appearance about the water; then work in the salt, about a full tablespoonful to the pound, and pack it in a tray and keep cool till the next day, when it must have another working, and put it back to stand for three or four days and give it a last working, expelling every drop of water. Make it into pound rolls, and put each roll into a small bag. Make a brine with one quart of salt, one gallon of water, half-cup of sugar, and a teaspoon of saltpeter. Boil and skim it, and when it is cold drop the butter into it and weight the rolls down. The large earthenware pots are better than anything else to keep it in, and you can use a small plate to weight the butter down with. When the jar is full, tie over the top a piece of oil cloth and keep cool.

Northern Virginia,

Grain, Fruit, Dairy and Blue Grass Farms of every class within one hour of Washington, D. C.

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Farms a Specialty
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Home Seekers and Speculators.

I am in position to show you the largest list of properties you can find in Northern Virginia, consisting of STOCK, GRAIN, DAIRY, FRUIT, POULTRY, TRUCK, and BLUE GRASS farms, VILLAGE HOUSES and BUSINESS SITES all within 1 to 2 hours of the National Capitol. For free catalogue and full particulars, call on or address W. H. TAYLOR, Herndon, Va.

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If you want to buy, sell, rent or exchange a farm or suburban home, see
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Productive Farms,

Hanover county, between the mountains and Tidewater. Land and seasons conducive to successful farming. **FRANK H. COX, Ashland, Va.**

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In Valley or Piedmont section of Virginia, near town or city. **R. M. DORSEY, M. D., Ellicott City, Md.**

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ALL KINDS OF

LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkey, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

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"Mack's Pride"

4507 P. D. S. B.—88864 A. K. C. S. B.

White, blue belton and tan ticked.

The last and best of the celebrated Ch. Cincinnati Pride—Brown's Queen Ye strain. Full brother to seventeen field and brush winners.

Sportsmen of the South will find in this dog perfection of breeding, conformation and shooting qualities, and a proven transmitter of the two latter. Nothing better with which to breed up the native or to inbreed Llewellyn setters. Correspondence solicited. Fee, \$10.

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For small size, well bred, excellent hunting stock, write to ROBT. HIBBERT, Charlottesville, Va.

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Champion blood of England and America. Puppies now ready to ship. Also bitches in whelp for sale. F. W. MEYER, Norfolk, Va.

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3 years old; completely broken; very fast, staunch to wing and shot, to exchange for pure bred, well broken Scotch Collie not over 18 months old. C. E. BENSCHOTER, Charlotte C. H., Va.

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of imported and prize winning stock, FOR SALE. For particulars, address E. F. HENKENIUS, TYLER, Hanover Co., Va.

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TWO BOSTON TERRIERS.

Must be good breed; also several pairs of PLYMOUTH ROCK Pigeons and some HOMERS. JOHN N. ADAMS, Del Rio, Tenn.

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For sale, 10 months old and pure bred. Price, \$10. LANDOR POULTRY YARDS, Croxton, Va.

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An extra choice lot of POLAND CHINA PIGS, all recordable. They carry blood of LOOK-ME-OVER and TECUMSEH. \$5 will get a choice pig. We offer one 2 year old registered boar, "Big Sam," No. 60153. The first \$20 gets this valuable animal. To avoid inbreeding this low price is made. A fine lot young SINGLE COMB BUFF ORPINGTON Cockerels, \$1.50 to \$3. Some show birds in cocks at \$5 to \$10. A few trios, 2 hens and 1 cockerel, for \$5 per trio. Eggs, \$1 per 15, and for a limited time we will prepare express to all Virginia points. We take pleasure in replying to all inquirers. OCONEECHEE FARM, Jeffress, Mecklenburg, Co., Va.

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Brine Corn in the Shuck.

If you have a fine patch of tender corn which will harden before it can be used, you can, by brining it, save every ear. It is better that it should be a little too green than the least bit too hard. Use a tub or cask for packing. Gather the corn and pull off all the outer shucks, leaving one layer only on each ear. Pack as tight as you can in the tub, and when it is full, pour over the whole a brine made with a quart of salt to each gallon of water. Keep the corn weighted down under the brine, and it will keep as fresh as if just gathered for weeks. We stored two hundred ears this way once and used every bit of it.

Quince Cheese.

Peel and core the quinces and boil them until very tender; then put them through the potato masher or fruit press and see that every lump is mashed smooth. Now measure, and to each quart add a quart of sugar and mix thoroughly; let it boil slowly until very thick, stirring all the time to prevent sticking. Half hour before taking off put in mace, allspice, and either ginger or nutmeg. When this is cold it will be very stiff, and can be sliced with a sharp knife. In making these stiff jams and preserves, the little asbestos mats, which can be bought for five and ten cents, are a great safeguard against burning and scorching.

Ripe Tomato Sweet Pickle.

The small red tomatoes, or the yellow pear tomatoes are best for this. They should be just ripe, but not at all soft. Drop them into boiling water for a few moments and slip the skins off. Make a limewater with a heaping tablespoon of lime to a gallon of water; put the tomatoes in this and let them soak for two hours; then drop them into cold water for two hours. To seven pounds of tomatoes allow three pounds of sugar, one quart of vinegar, ginger, allspice, cinnamon, and celery seed and a few cloves. Put the spice, sugar and vinegar on and let them boil; then put the tomatoes in a few at a time, spreading them on dishes in the sunshine, and at intervals return to the kettle. They will not fall to pieces if you are careful, and should be quite clear when done.

Hyden Salad.

There seems no end to the variety of mixed pickles, and each housekeeper thinks that her recipe is the very best of all. This one is good, but I do not say that it is the very best. Chop one gallon of cabbage, two quarts of green tomatoes, one pint of green peppers, with the seed taken out; one quart of onions. Mix them all together and sprinkle a handful of salt through them and hang up in a bag to drip all night. In the morning squeeze out all the water and put the mixture into the porcelain kettle, adding two pounds of sugar, two tablespoons of ginger, three tablespoons of turmeric, three of celery seed, one tablespoon

"Quality Counts"

—MY—

Barred Plymouth Rocks

this year prove that quality and scientific breeding pays. Their points of excellence are easily recognized. They satisfy customers. Every bird is guaranteed to please, or money refunded. Early hatched cockerels—for breeding or exhibition—big blue barred, healthy, vigorous fellows ready for delivery October 1st. Get your orders booked early. No better stock in the South. L. W. WALSH, Drawer 248, Lynchburg, Va.

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Extra line cockerels of Barred White and Buff P. Rocks, Black Minorcas, White, Brown and Buff Leghorns in Rose and Single Comb. Also 30 other varieties. Price too low to make public. Write about it. Large Poultry Book only 6c. JOHN E. HEATWOLE, Box L, Harrisonburg, Va.

**W. Plymouth Rocks**

LARGE AND PURE WHITE.

BEST LAYING STRAINS.

Cockerels and Pullets or sale cheap; also exhibition stock. BROWN LEGHORNS, R. W. HAW, Centralia, Va.

Chickens, Turkeys,

for sale. M. B. Turkeys, Barred Plymouth Rock and White Wyandotte chickens, S. C. B. Leghorn hens. All satisfied customers who purchase of Lander Poultry Yards, Croxton, Va. Quick sales. Order now.

MISS CLARA L. SMITH, Prop'r.

Barred Plymouth Rock

Cocks and Hens, 17 months old; cockerels and pullets, 5 months old, all highly improved, for sale at dirt cheap prices. Satisfaction or money refunded. W. C. NOWLIN, Spout Spring, Va.

COCKERELS for sale

100 S. C. BROWN LEGHORNS,
20 B. PLYMOUTH ROCKS,
10 S. C. WHITE LEGHORNS.

Order early if you want some nice pure bred cockerels. TOLAND POULTRY FARM, Blacksburg, Va.

LOUHOFF'S

White Wyandottes, White & Brown Leghorns, Barred Plymouth Rocks.

A lot of choice cockerels and Brown Leghorn pullets and hens at 75 cents each.

PIEDMONT HEIGHTS FARM,
Yancey Mills, Va.

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SINGLE COMB BROWN LEGHORNS
EXCLUSIVELY.
Eggs for hatching now from new mating.
Best laying strain, \$1 for 15; \$6 per
100. No stock for sale. CAL HUSSEL-
MAN, R. F. D. 6, Richmond, Va.

PURE-BRED

S. C. W. LEGHORN

Cockerels from Wyckoff Strain of celebrated
layers, pure and unmixed, \$1 each. COT-
TON VALLEY FARM, Tarboro, N. C.

15 EGGS ONLY 75 C.

From choice pure-bred S. C. BUFF ORP-
INGTONS or R. C. WHITE LEGHORNS.
Order direct from Ad. Satisfaction guaran-
teed. T. M. KING, Hagan, Va. R. F. D. No. 2.

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BROWN LEGHORN

Eggs for sale; 15 for 75c., 30 for \$1.25.
Send us your order and get a good stock of
chickadees. We give satisfaction. Prompt
shipment.

Stock for sale after August.
"The Manager of Meherilla Poultry Farm
is well known to me, and is thoroughly re-
liable."—S. B. COGGIN, Apt. 30, Ex. Co.
MEHERILL Poultry FARM, Branchville,
Va.

EGGS FOR HATCHING.

\$1 for 15. Black Minorcas, Black Lang-
shans, Barred and White Rocks, Light Brah-
ms, S. L. Wyandottes, S. C. W. Leghorns,
S. and R. C. B. Leghorns. A few more S. L.
Wyandotte cockerels for sale, \$1 each. J. B.
JOHNSON, Clover Hill Farm, Manassas, Va.

WANTED AT ONCE

100 3-lb. pullets, 20 4 lb. cockerels, PLY-
MOUTH ROCKS, R. I. REDS, JAYAS,
WYANDOTTES or INDIAN GAMES. Will
exchange S. C. R. and I. Red. and Blue
B. P. Rocks. J. W. MOODY, McColl, S. C.

Trio Embden Geese

Wanted. State price. J. L. GRAY, Nor-
wood, Va.

FINE STOCK FOR SALE

1 extra fine black saddle horse 7 years
old; very stylish and handsome; weight,
about 1200 pounds; perfectly reliable in all
harness. I don't believe there is a better
horse in Virginia.
2 splendid saddle gelding 8 years old;
weight about 1200 pounds; drives nicely;
very gentle; rides well; perfectly reliable in
all harness; few such on the market.
1 registered O. I. C. Boar, 12 months old;
well grown, and a beautiful hog.
2 Berkshire sows 24 months old, with pig,
by a registered O. I. C. boar. A fine lot of
thoroughbred O. I. C. pigs, both sexes, at
reasonable prices.
7-8 and 15-16 GRADE ANGUS BULL and
Heifer Calves.
1 BULL CALF out of Shorthorn Cow, by
Angus Bull.
Several fine family milk cows, fresh.
Several registered Angus Bull and heifer
calves.
2 beautiful pure bred Llewellyn Setter
Pups for sale at \$5 each. None better at
any price.
SILVER LACED WYANDOTTE eggs, \$1
for 15.

W. M. WATKINS & SONS, Saxe, Va.

BEST HOG ON EARTH

CHESTER WHITES at farmers' prices.
S. M. WISECARVER,
Rustburg, Va.

of cloves, one of cinnamon, one table-
spoon of mace. The spices must be
bruised and mixed through the vegeta-
bles and three quarts of good vinegar
poured over them. Boil about three
quarters of an hour.

Tomato Sauce for Meats.

The tomatoes must be fully ripe for
this. Pour boiling water over them
and slip the skins off. Cut them up
and weigh. To twelve pounds of to-
matoes allow six pounds of sugar, one
tablespoon of spice, one tablespoon of
cinnamon, one tablespoon of cloves;
boil all until pretty thick, and then add
one quart of vinegar; boil a few min-
utes longer, and seal in quart jars. Use
as you would catsup, for cold meat or
roast beef.

Tomato Catsup, Without Cooking.

Chop one peck of ripe tomatoes, six
large onions, five large green peppers.
Press out the juice of all these and add
one kitchenpoon of grated horse-
radish, one tablespoon of ground black
pepper one tablespoon of celery seed,
one teaspoon of white mustard seed, one
teacup of black mustard seed, one cup
of salt. Mix thoroughly through the
vegetables and pour five pints of good
vinegar over. Bottle and keep cool.
This has the advantage of not being
cooked at all, and consequently is less
trouble, but it takes some time to be
ready for use.

Grape Sherbet.

Squeeze the grapes and take two
quarts of the juice and strain and
sweeten. It takes very little sugar.
Add two cups of orange juice, which
will need one cup of sugar to sweeten.
Put the mixture into the freezer and
turn till half frozen, then add the
beaten whites of three eggs, with
about half cup of sugar beaten into
them; freeze hard and set aside for
several hours.

Irish Potato Custards.

Beat six eggs together until very
light. Cream half cup of butter, and
a half cups of sugar, one and a
half cups of mashed Irish potatoes to-
gether; add a cup of cream, one table-
spoon of brandy and the juice of two
lemons; lastly, the eggs. Bake in rich
crusts and serve cold.

CARAVEN.

BEST BEFORE AMERICAN PEOPLE.

Milton, N. D., Nov. 15, 1904.
Dr. D. J. Kendall Co.,
Enosburg Falls, Vt.:
Gentlemen,—Please send me a copy
of your valuable book, "A Treatise on
the Horse and His Diseases." This
book is like your Kendall's Spavin
Cure, the best that ever was put out
to the American people. Wishing you
success, I remain,
Very truly yours,
WM. G. GRAHAM.

A neat Binder for your back num-
bers can be had for 25 cents. Address
our Business Office.

Thoroughbreds
FOR SALE.

BURT, foaled 1901. Bay colt, by Aunra.
Cara Bill, by Imp. Charaxus.
FLORENCE GLENN, foaled 1898. Chest-
nut mare, by Linsey Woolsey—Thelma, by
Imp. Esher.
AGNES GRAY, foaled 1901. By Jim
Gray, St. Olga, by Imp. St. Blaise; 2d. dam
Othipa, by Imp. Leamington; 3d. dam, by
Lexington; 4th dam, by Imp. Glencoe, etc.
Agnes Gray now has a filly foal by Imp.
Potentate.
HANNAH C. foaled 1902. Bay filly by
Aunra, Kathleen Gray, by Jim Gray; 2d.
dam, Katie C., by Imp. Charaxus. I also
have others from one to two year olds, by
Imp. Waterlevel and Imp. Potentate. None
of them have been trained or raced. S. H.
WILSON, Byrdville, Va.

Pair of Horses

wanted in the fall; must be farm raised,
Virginia horses, free goers, thoroughly bro-
ken for ladies driving, either single or
double, sound, medium size, about 6 years
old, fit for light work. Will deal with
owner and not a dealer. Mrs. R. M.
SMITH, Cousins Island, Maine.

A REGISTERED

HACKNEY MARE, No. 352, 12 years old,
for sale. Sire, Star of Mepal; dam, Bright
Star. Fine saddler and driver, and a splen-
did brood mare. Has vigorous constitu-
tion, rapid gait, and fine action; her only
defect being a knot on right knee, which
does not seem to interfere with her driving
qualities. Price, \$200. Her 1903 colt sold
for \$250 at 2 years old. T. P. SHELLTON,
Jetersville, Va.

JACKS

SADDLE HORSES &
POLAND-CHINA HOGS
Young stock always on
hand and for sale.
Seventy-five March pigs.
They are beauties.
J. F. COOK & CO.,
Lexington, Ky.



A VERY FINE

VIRGINIA BRED JACK

3 years old 10th of last June. First sea-
son out and more than paid for himself.
Sound, gentle and a perfect beauty. Price,
\$350, half cash and 12 months' note, or
balance, with interest at 6 per cent. License
paid to May 1, 1906. J. E. THOMASSON,
Bumpass, Va.

Jacks, Jennets and Mules.



A fine lot of Ken-
tucky bred and big
black Spanish jacks
and jennets. Also
mules, match teams,
one to six years old.
Write or see me be-
fore you buy. Come
to Kentucky if you
want a good jack.
KENTUCKY JACK
FARM, JOE E. WRIGHT, Junction City, Ky.

PRESERVE

Eggs For Winter.

Experience has proved that Water Glass
is the most satisfactory material for pre-
serving eggs. No change in the quality of
the eggs at the end of a year. For prices
and other information write to J. B.
WEEMS, Crewe, Va.

RARE BARGAIN IN HEREFORDS

IF TAKEN AT ONCE, GOOD REASONS FOR SELLING.

BELLE DONALD 4TH, calved June 22, 1904; sire Beau Donald 39th, dam Belle Donald 46th.

INEZ, calved August 10, 1903; Sire Van 102985, dam Actress 7th, 115133.

LADY OF INGLESIDE 161317, calved Mar. 2, 1903; sire Vere 130527, dam Gladys 37042.

PRINCESS DONALD, calved Aug. 20, 1904; sire Beau Donald 53996, dam Princess R. 10th.

IONE 136238, calved Oct. 27, 1901; sire Mar-maduke 90033, dam Irene 90767.

ACTRESS 7TH, calved Aug. 1, 1900; sire Actor 3d 55023, dam June 60542.

PANSY 90772, calved March 20, 1899; sire Montclair 74407, dam Peerless 38331.

PRINCESS R. 5TH 142711, calved Jan. 2, 1902; sire Prince Rupert 79539, dam Lily Princess 26739.

PRINCESS R. 12TH 142714, calved Jan. 5, 1902; sire Prince Rupert 79539, dam Lily P. 24 of P. 63937.

PRINCESS R. 7TH 130479, calved March 11, 1901; sire Prince Rupert 79539, dam Florence 2d 65833.

All of breeding age have been served to Rex Premier 145572, whose show record as a calf is first at Missouri State Fair, first Ham-cline, Minn., and first at Kansas City Royal.

The above are all choice individuals. Every animal guaranteed. They represent the very best Hereford blood, but this will not be considered in picking them for prompt acceptance. Address

ELKTON STOCK FARM, FOREST DEPOT, VA.

Hereford Bulls

Registered young stock for sale. HIGH GRADE HEREFORDS of both sexes also; WANTED some high grade SOUTHDOWN EWES. WM. C. STUBBS, Valley Front Farm, Sassafras, Gloucester county, Va.

TWO REGISTERED Shorthorn Bulls

12 and 18 months old. Price, \$40 and \$50. Splendid ones. 5 ANGORA BUCKS, pure bred, at \$5 to \$8. 8 h. p. GEISER ENGINE in good condition. I. S. EBERLY, Glendale, Va.

THE SPRINGWOOD SHORTHORNS

Herd headed by ROYAL CHIEF, 185432, he by ROYAL STAMP, the champion Bull of Ohio last year. I now offer for the first time some extra nice red and roan heifer calves, 6 to 12 months old; a special offering; one 2 year old bull and some younger ones. W. T. THRASHER, Springwood, Va.

25 SHORTHORN and ANGUS

cows and heifers for sale: all high grades and young; some good milch cows in lot; also a 3-year-old pure bred Angus Bull. C. H. NOLTING, Medlock, Va.

ELLERSLIE FARM

**Thoroughbred Horses
AND SHORTHORN CATTLE,
Pure Southdown Sheep
and Berkshire Pigs.**

For SALE. R. J. HANCOCK & SON,
CHARLOTTESVILLE, VA.

HINTS BY MAY MANTON.

Nothing that the season has brought has taken a firmer hold upon fancy than shepherd's check, and it never appears to better advantage than when combined with plain color, as in the illustration. In this instance, the material is blue and white linen voile, and the yoke and cuffs are of plain white linen, but whatever the fabric, the color scheme remains the same. The dress is an exceptionally pretty one, with the slightly low neck and elbow sleeves, that are so charming, worn by little girls, and could appropriately be made from any seasonable material.

The dress is made with the waist and the skirt, the waist being gathered



5092 Girl's Dress 6 to 12 years, at both upper and lower edges, and joined to the square yoke at the neck and to the round yoke of the skirt, while the sleeves are full and finished with the cuffs. The skirt is straight, gathered at its upper edge and joined to the circular yoke, and the closing is made at the back.

The quantity of material required for the medium size (10 years) is 4½ yards 27, 3½ yards 32 or 3 yards 44 inches wide, with ½ yards 27 inches wide for yokes and cuffs.

The pattern 5092 is cut in sizes for girls of 6, 8, 10, and 12 years.

The plaited walking skirt, in its many variations, appears to have taken a hold upon the fashionable world that nothing can shake, and is promised in ever increasing variety. This one is among the most graceful, there being

Lynnwood Stock Farm

has maintained its supremacy in the prize rings as usual, as attested by the Horse Show record in the draft classes, as the Percherons winners, 16 in all, were, with two exceptions, the products of the Lynnwood Stock Farm.

VERY LOW PRICES WILL BE GIVEN ON SHORTHORNS, BERKSHIRE HOGS, and PERCHERON HORSES.

Come and see the stock that pays to breed and feed. JOHN F. LEWIS, Lynnwood, Va. Station "Lewis," N. & W. R. R.

SHORTHORN BULL

To avoid inbreeding, I will sell or trade for a bull of equal breeding, my royalty bred herd bull, ROAN DUKE, 140106, sired by Imported Duke of Hamilton, 107363, bred by Wm. Duhie, of Aberdeenshire, and out of Lavender of Hill Farm, 10th, bred by J. F. Prather, of Illinois. As his name indicates, he is a roan; calved January 22, 1898; is kind and gentle; not given to rambling; large and a magnificent breeder. For extended pedigree, etc., address WM. E. PEERY, Five Oaks, Tasewell county, Va.

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**Berkshire Boars,
Dorset Buck Lambs,
Jersey Bull Calves.**

All stock in best of condition and guaranteed as represented.

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My Morgans won 19 premiums at St. Louis World's Fair, including Premier Championship for Exhibitor, winning largest amount in breeding classes.

Pure Scotch Shorthorns, of best breeding; also excellent Polled Durhams

50 head choice registered SOUTHDOWN BUCKS and EWES from Imported Prize Winners.

Duroc Jersey Hogs L. L. DORSEY, Anchorage, Ky. (near Louisville.)

DEVON HERD, HAMPSHIREDOWN FLOCK. ESTABLISHED 1854. ESTABLISHED 1860.

DEVON CATTLE BULLS and HEIFERS. Hampshire Down Sheep, RAMS and EWES.

ROBERT J. FARRER, Orange, Va.

Angus Cattle

for sale at attractive prices.

A few nice Heifers, 1 Yearling Bull, 1 Eight Months Old Bull and some fine BULL CALVES, all the get of our Registered Bull, MARVEL (grandson of the great bull, Gay Blackbird) and out of pure-bred cows.

Address

WILSON BROS. & CO.,
News Ferry, Va.

Rose Dale Herd Aberdeen Angus.

Top notch young registered Bulls our specialty. A few heifers to offer with bull not akin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS, Jefferson, Va.

MONTEBELLO HERD ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va.



**High-Class
Aberdeen Angus.**
Choice males, suitable for heads of most select herds. Send for printed description.

JOHN T. & G. B. MANLOVE,
MILTON, IND.

TWO PURE-BRED

Aberdeen Angus

cows for sale; in calf second time to our pure bred Angus Bull, "Harmon." Apply to J. P. IRBY, Irby, Va.

TWO REGISTERED

Aberdeen Angus

Bulls, ages 6 and 12 months, for sale. For particulars address E. T. TAYLOR, Manager Thomas Nelson Page's Mont Air Farm, Bandana, Va.

Registered DEVON

cows and heifers and heifer calves for sale at farmers' prices. W. E. THOMAS, Nasawadox, Va.

75 or 100 Angora Goats

Wanted at once; also 3 or 4 Registered Bucks. State lowest cash price. S. SWANSON, Grove, Va.

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abundant flare and fullness below the stitchings, while it is without awkward bulk over the hips. The model is made of white mohair stitched with belting silk, but is fashionable for all suitings and all skirting materials, whether for those of immediate wear or the future, as the skirt is one that can be relied upon for many months to come.

The skirt is cut in nine gores, the



5107 Nine Gored Side Platted Skirt,
22 to 30 waist.

plaits being so arranged as to conceal the seams, and is laid in inverted plaits at the back.

The quantity of material required for the medium size is $\frac{1}{2}$ yards 27, 5 yards 44 or $\frac{1}{2}$ yards 52 inches wide when material has figure or nap; $\frac{7}{8}$ yards 27, $\frac{1}{2}$ yards 44 or $\frac{3}{4}$ yards 52 inches wide when it has not.

The pattern 5107 is cut in sizes for a 22, 24, 26, 28 and 30 inch waist measure.

We can furnish these patterns at 10 cents each.

Southern Planter, Richmond, Va.

ROANOKE FAIR.

The great Roanoke Fair, to be held in the city of Roanoke, Va., on the 26th, 27th, 28th, and 29th days of September, promises to be one of the principal events in Virginia this year. Being conducted as a State Fair, under a special charter granted by the Legislature, exhibits are solicited from every section of the State. As the premiums are also "open to the world," it is expected that all the adjoining States will be represented at this fair. The total amount of cash offered in premiums is 10,000, but a long list of special premiums—over five hundred in all—will increase the aggregate by several thousand dollars.

The live stock display promises to be the largest in the South this year. The leading breeds of cattle are recognized, and the premiums are for thoroughbreds only. The liberal sums offered for Hereford and Polled Hereford cattle are duplicated by the Breeders' Associations of these respective breeds, so that the first premium for

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS AND HEIFERS.



None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$35; Heifers, same age, \$35. POLAND CHINA FIGS. 8 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

Fine Jersey Bull

for sale, Reg. A. J. C. C., 3 years' old; kind and gentle; no fault; for price and particulars address MONTEBROOK, Box 213, Keysville, Va.

HIGHLY BRED JERSEY COWS

fresh to the pail, for sale; also REG. JERSEY BULL 6 months old, from high testing stock. S. C. BROWN LEHGHORNS, at farmers' prices. EVERGREEN FARMS, W. B. GATES, Prop., Rice, Va.

REGISTERED

Holstein Friesian Cattle and Berkshire Hogs

Any age. Address J. WALTER ROBERTSON, Whaleyville, Va.

REGISTERED

Shropshire Sheep FOR SALE

1 3-year-old Ram, out of imported stock; an extra fine individual, a twin, weight from 175 to 200 pounds. Price, \$20.

1 Yearling Ram; late summer, 1904, lamb; good individual, slightly undersize owing to former owners having no pasture, 1904; weight about 125 pounds. Price, \$12.

1 Ram Lamb; fine individual; weight 90 to 100 pounds. Price, \$10.

2 4-year-old Ewes; good individuals. Price, \$10 each. Prices are f. o. b. this place. All registered. H. R. GRAHAM, Chestertown, Md.



Essex Pigs and Southdown Lambs.

Some fine Essex Pigs, March farrow, also July pigs for September delivery. Choice Southdown Lambs. Your orders solicited.

L. O. JONES,
R. F. D. No. 1, Tobaccoville, N. C.

Dorsets

Woodlawn Farm has a few of the best rams it has ever offered. Wool is an item worth considering this year, and our rams are exceptionally heavy shearers, besides having excellent mutton forms. J. E. WING & BROS. Mechanicsburg, O.

POLAND-CHINA PIGS.

Some fine ones young sows, bred, young boars and pigs. No better breeding in the United States. My herd boars have been sired by J. H. Sanders, Lookmeover, Perfect 1. Know, Proud Perfection, Corrector, and High Roller, the greatest prize winners of the breed—my sows have been as carefully selected.

RED POLLED CATTLE. Fine, good young bulls. Will sell a few cows and heifers. **ARROWHEAD STOCK FARM, Charlottesville, Va., SAM'L B. WOODS, Propr.**

POLAND-CHINAS

with the BUSINESS HAMS.

Large, mellow, easy keepers. Bred right and sure to please. **SUNSHINE, U. S., PERFECTION and TECUMSEH** blood. A few Spring pigs of both sexes, eligible to registry, for sale.

A. GRAHAM & SONS, Overton, Albemarle county, Va.



Orchard Hill Pure-Bred

POLAND-CHINAS.

2 brood sows bred and some nice 2 mos. old pigs for sale; also 2 fine GUERNSEY BULL calves, whose grand dams stood the advanced Registry test of 348 pounds or more in 1 year. **F. M. SMITH, JR., R. F. D. 4, Charlottesville, Va.**

Registered P. Chinas Berkshire

C. Whites. Large strain. All ages mated not skin, 8 week pigs, bred sows, service boars, GUERNSEY calves, Scotch Collie pups, and Poultry. Write for prices and free circulars. **P. F. HAMILTON, Cochranville, Chester Co., Pa.**



SALT POND HERD

Duroc Jerseys

PAUL J., 21825, heads the herd, with such sows as LULIE'S PET, 40434, BELLE OF SALT POND, 70454, and LADY OF VIRGINIA, 70456. Young stock for sale. **S. A. WHITTAKER, Hopeside, Va.**

Duroc Jersey Pigs

Fine Registered Stock for sale; fall delivery.

ORPINGTON and WHITE ROCK Eggs from the best strains that money can buy; Pekin Ducks; also 10 Bee Hives for sale. **W. M. CARROLL, Box 106, Lynchburg, Va.**

REGISTERED

Duroc and O. I. C.

Pigs at farmers' prices. No runts or scrub pigs sent out. Satisfaction guaranteed or money refunded. **J. E. THOMASSON, Bumpass, Va.**

SOME NICE

BERKSHIRES

for sale. 1 Reg. boar, one and one-half years old; 2 Reg. Sows, 2 years old, and 2 young sows eligible to registry. Will sell the lot or singly at very reasonable prices. **J. A. TURPIN, Hallsboro, Va.**

best bull is \$30; for the best cow, \$30, and so on.

The premiums in all departments are twice what they were last year. The list of farm products has been greatly extended, and new departments have been added. The same can be said of the Domestic and Art Departments.

The race purses aggregate \$4,300, and \$300 is offered in addition for prizes in the riding and driving contests, besides many special premiums offered for the winners in these contests by the enterprising business men of the city of Roanoke.

The entries close as follows: For the harness races, September 19th, at 11 P. M.; for the running races and riding and driving contests, the day before each takes place, at 6 P. M.; in the live stock department, September 23d, at 5 P. M., and in all other departments (including poultry), on September 26th, at 5 P. M.

Copies of the premium list, entry blanks, etc., can be obtained by addressing Cyrus T. Fox, Manager, Roanoke, Va. The advertisement of the fair appears in this issue of the Southern Planter.

SPLITTING OF CHURCHES.

Division is not a bad thing in itself. All living things grow by division. Churches—live churches—follow the same law. But the simple fission of the cell into two equal, similar and independent cells is confined to the lowest branch of the animal and vegetable kingdoms. It is in church history as it is in natural history. When we find on opposite sides of the road two little white churches exactly alike, except that the steeple is on the north end of one and on the south end of the other, we know it belongs to the protozoan period of ecclesiastical development. We have outgrown the stage of the multiplication of churches by the primitive processes of splitting, secession and recession. Even in Scotland, where the process was formerly most active, until a church was reduced to "me and Sandy," with doubts as to the latter's orthodoxy, the tide has turned and the churches are reuniting.—From the Century.

THE HAWKEYE GRUB AND STUMP MACHINE.

We invite the attention of our readers to the advertisement of the Milne Mfg. Co., Monmouth, Ill., to be found in another column. This firm is one of the oldest makers of Stump and Grubbing Machinery in the country. For a number of years they have been advertising their Hawkeye Stump Puller in our columns, as many of our readers know. To those who have not investigated the merits of their machines, we say, look up the ad and get their catalogue at once. The firm is entirely reliable, and will treat our readers liberally.

GLENBURN

BERKSHIRES



In this herd are twelve royally bred IMPORTED animals. Also selected American bred stock. Our IMPORTED boars Hightide Royal Victor and Loyal Hunter won first at Eng. Royal and Va. State Fairs, respectively. A splendid lot of pigs of gilt edged breeding now ready for shipment. **Dr. J. D. KIRK, Roanoke, Va.**

MAPLE GROVE

BERKSHIRES

THE BEST BRED and BEST INDIVIDUALS I ever offered the public. Try me with an order and see if I don't send you something good.

J. W. McFADDIN,

R. F. D. No. 1, Raphine, Va.

BERKSHIRE

I offer some exceedingly choice

BOARS.

young boars for sale; by Imported Danesfield Tailor, 76940 and out of Biltmore bred sows. It will be hard to find better or cheaper stock.

HENRY WARDEN, Fredericksburg, Va.

WALNUT GROVE FARM,

SHAWSVILLE, VA.

Orders now taken for pure-bred

BERKSHIRE PIGS

to be delivered after December 1st. None but the best will be shipped, other go to the pen. One two year old Hereford Bull, registered, for sale, a perfectly formed animal, and as well bred as America's best. Address all communications to **W. J. CRAIG, Mgr., Shawsville, Va.**

PURE-BRED

Berkshire Pigs

2 mos. old, \$4 each; \$7 per pair; out of pure bred sows and by registered boars. Delivery Sept. 1st.

H. SWINEFORD,

1110 E. Main St., Richmond, Va.

Berkshire Pigs

Hawkesley Stock Farm has them of the best breeding; fine individuals. **J. T. OLIVER, Prop., Allen's Level, Va.**

MAPLEWOOD HERD

Pure-Bred Berkshires.

Choose individuals. Selectly bred. Write for prices, stating your wants. **JOHN F. TUCKER, Smyrna, Tenn.**

"The best lot of horse medicines I ever used," is the way **Ellis E. Steiner, R. F. D. No. 1, Orrville, O.** expresses his appreciation of Absorbine and other remedies of my manufacture, under date January 11, 1905. Send for free book telling all about them. Absorbine, \$2.00 per bottle, delivered, or at your druggists. **W. F. Young, P. D. F., 109 Monmouth St., Springfield, Mass.**

Don't Give Up.



There is a cure for Spavins, Ringbones, Curbs, Splints and all other forms of lameness. It has been used all these years by the best horsemen, breeders and trainers and it never fails. That is their testimony on

KENDALL'S SPAVIN CURE.

Brooklyn, Conn., Jan. 10, 1904.

Dr. B. J. Kendall Co., Enosburg Falls, Vt., Gentlemen: I would like you to send to my address your "Treatise on the Horse and His Diseases." I use Kendall's Spavin Cure and know its goodness as I have cured two Bone Spavins on two different horses and know it is the best of anything I ever tried or heard of.

Very truly yours,

A. M. BUTLER.

Price \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for KENDALL'S SPAVIN CURE, also "A Treatise on the Horse," the book free, or address

DR. B. J. KENDALL CO., Enosburg Falls, Vt.

Spavin

Bone Spavin, Bog Spavin, Ringbone or all or of blenheim—we have what you need to make a certain cure. Guaranteed always—money right back if it ever fails.

Fleming's Spavin Cure (Liquid) for the soft bunches—Paste for the hard ones. A 45-minute application and the lameness goes. Lots of blenheim information in the free book we send.

Fistula and Poll Evil

Do yourself what horse doctors charge big prices for trying to do. Cure Fistula or Poll Evil in fifteen to thirty days.

Fleming's Fistula & Poll Evil Cure is a wonder—guaranteed to cure any case—money back if it fails. No cutting, no scarring. Leaves the horse sound and smooth. Write for our free book on diseases and blinches of horses.

FLEMING BROS., Chemists, 250 Union Stock Yards, Chicago, Ill.

Heaves, Cough & Distemper in horses CURED by use of Seely's Liquid Cough, Heave and Distemper Cure.

CURED is the word. No heaves too severe, no cough too hard, no throat irritation too acute. By mail, 65 cents. Address S. S. SEELY & CO., Dept. C, Bath, N. Y.



NEWTON'S Heave, Cough, Distemper and Indigestion Cure. A remedy for all the worst and most stubborn troubles. Strong and stomachic. \$1.00 per bottle. By mail, 65 cents prepaid. The Newton Remedy Co., Toledo, Ohio.

MAGAZINES.

If the story of "Two Boys and Ten Million Mosquitos," by Frank J. Stillman, in the September St. Nicholas, is not true, it ought to be. At any rate, it reads as if these two clever lads had really found a solution of the mosquito problem, so superior to the use of coal oil that it offers a field for enthusiastic investigators. The reading interest of the narrative is beyond all question. There are other good stories, too: "A Change of Craft," an exciting tale of adventure by Richard W. Child; "Two Maids and the Motto," a pretty story of school girls' friendship by Margaret Johnson; "What Uncle Tom Did," an animal story by Elizabeth Price; another of Captain Harold Hammond's "Pinkey Perkins" stories, "How Pinkey Triumphed by Diplomacy"; a new "Chuckie Wuckie" story by Isabel Gordon Curtis, "Her Friend With Brass Buttons," and more exciting chapters of "Queen Zixi of Ix." The illustrations in color of this jolly serial continue a delightful feature of the 1905 St. Nicholas.

Joseph H. Adams introduces "The Practical Boy" this month to the pleasures of a home-made gymnasium, and Dr. E. E. Walker's "First Aid to the Injured" papers give the home remedies for simple poisoning. Luria Ames Mead has a helpful talk about architecture and its lessons; Cornelia Hickman tells of "A Visit to Plymouth Rock," and Charles H. Caffin's "How to Study Pictures" series deals this month with Pilots and Fortuny.

The September Century is decidedly a fiction number, with ten complete stories, beside the closing chapters of L. Frank Tooker's stirring novel of the sea, "Under Rocking Skies." First place is given to a study of English character by the author of "The Prisoner of Zenda," "The Dolly Dialogues," etc., Anthony Hope. The story is entitled "Miss Gladwin's Chance," and is illustrated by Jay Hambridge. There is a love story, "Lady Quassia," by Elizabeth Robins, author of "The Magnetic North"; Harvey J. O'Higgins, author of "The Smoke-eaters," contributes "Old Clinkers," another story of New York firemen; and there is another of Lawrence Mott's Jules of the Greatheart stories, "Remember Jules!" Among the work left behind her by the late Elizabeth Cherry Waltz, author of "Pa Gladden," was "A Lady of Balance." This story of racing characters and scenes in Kentucky is one of the September Century's offerings. Edwin L. Sabin's studies of boy life are continued in "Middleton's Hill," a sledding story which will bring a cool contrast to the season's heat. There is a tale of the civil war, "Mary Ellen and Evelyn May," by Gouverneur Morris. "The Battery Fool," happily timed, is a systematically treated Japanese love story of the present war by Oscar King Davis, the well-known correspondent and story writer. Elizabeth Herrick

has written a story of divorce, which is really a social study. "The Case of Patricia." Last, but by no means least, is one of Seumas MacManus's Irish character stories, "Mrs. McGroarty's Inheritance."

The September Century is strong, too, aside from fiction. Count Louis de Perigord and Camille Gronkowski begin a series of articles on "Historic Palaces of Paris," with an account in this issue of the Hotel Monaco, and of strong interest is an authoritative description of "The Proposed Changes in the National Capital," by Christian Brinton, with illustrations, published now for the first time, from the plans of the consulting architects, Carrere & Hastings.



GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

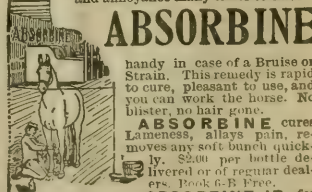
Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

IT SAVES TROUBLE and annoyance many times to have



ABSORBINE cures Lameness, allays pain, removes any soft bunch quickly. \$2.00 per bottle delivered or of regular dealers. Book 6-B Free. **ABSORBINE, JR.**, for man and beast. Cures Badly Strained Joints or Ligaments. Kills Pain. W. F. YOUNG, P. D. F. 109 Monmouth St., Springfield, Mass.

NO MORE BLIND HORSES.

For Specific Optimalm, Moon Blindness, and other Sore Eyes, Barry Co., Iowa City, Ia. have a cure.

THE FARMERS NATIONAL CONGRESS AT RICHMOND, SEPTEMBER 12-22, 1905.

Railway and Hotel Rates, Etc.

All the railways of the Central Passenger Association and of the South-eastern Passenger Association have made a rate of one fare plus 25 cents for the round trip to our session at Richmond, Va. The roads of the Western Passenger Association and also of the Southwestern Association have made a rate of one fare plus \$2 for the round trip. The railways of the Trunk Line Association, of New England, etc., have made a rate of one and one-third fares for the round trip. The dates of sale are such as to allow ample time to reach Richmond before the opening of the annual session, and the dates of the session are such that the delegates will have ample time for side trips after the regular business of the Congress is closed. All railways leading out of Richmond have made a rate of one fare plus 25 cents for the round trip to all points south of the Ohio and Potomac and east of the Mississippi, trips to be within time limits of the annual session. All special rates are good for all delegates, and also all members of their families travelling with them to the session, as these are made associate members of the Congress. As the regulations in different passenger associations vary, it is impossible to give full information here. Delegates should consult their local ticket agent at least two weeks before they wish to start on the trip to Richmond. He can give full information. If he does not have it, he can get it by writing to the general passenger agent or his road. Delegates will confer a favor on the secretary of the Congress if they will report promptly to him and in detail any discourtesy on the part of any railway ticket agent when asked for information about rates to our session at Richmond or any failure or indisposition to give such information or to obtain it for a delegate.

Special rates have been made for several side trips from Richmond, outside of the general rate for such trips named above. Delegates may go by boat from Richmond to Old Point Comfort and then to Washington (this, also, by boat) and from Washington to Richmond or Gordonsville, as the delegates may wish, by rail, all for \$5.00. This rate is made by the C. & O. railway, and western delegates may take the C. & O. train home at Gordonsville, if they wish, without returning to Richmond. The same railway has made a rate of \$3.25 for round trip from Richmond to Virginia Beach and a rate of \$3.00 for round trip to Ocean View. The round trip rate to Appomattox is \$3.05, to Danville \$4.20, to Fairfax \$4.40, to Natural Bridge Station \$4.70, to Newport News \$2.25, to Norfolk \$2.50, to Old Point Comfort \$2.50, to Petersburg \$0.60, to Portsmouth \$2.50, and to Roanoke \$5.30.

One can get room and meals at



ACTOR 26TH, 136283.

INGLESIDE HEREFORDS.

Owned by S. W. Anderson, Blaker Mills, Greenbrier county, W. Va.

A choice lot of BULLS, COWS and HEIFERS for sale. Also a few POLLED HEREFORD BULLS recorded in the National Polled Hereford Records. Write for catalogue and prices. Farm near Alderson, W. Va., on the C. & O. R. R. Telegraph and Telephone office, Alderson, W. Va.

Bacon Hall Farm. Hereford Cattle :- Berkshire Hogs

REGISTERED—ALL AGES.

DORSET RAMS. Toulouse Geese, Muscovy Ducks.

MOTTO: Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.



Grand Champion Prince Rupert, No. 79539.

Registered Hereford Cattle and Berkshire Hogs.

EDWARD GAY BUTLER, Asselfield Farm, Berryville, Va.

Hereford Herd headed by Prince Rupert, No. 79539, whose son, Prince Rupert, 8th, was first prize in the 2-year-old class at the recent Chicago International show.

Berkshire Herd headed by Baron Premier, No. 55227, whose son "Admiral Schley" was first in the 6 to 12 months class at the International Show, 1902.

Young stock both calves and pigs for sale at reasonable prices.

CORRESPONDENCE INVITED.

HEREFORDS THAT ARE HEREFORDS

ACROBAT the greatest living Hereford sire, stands at the head of the most select collection of breeding cows in the South and East. Write for our Hereford History, Herd Catalogue, and large picture of ACROBAT. We have sold this month fine bull calves to Virginia and South Carolina, and one to Brazil, South America. Discriminating buyers get their breeding stock from Rosemont. There's a reason. We want to sell some nice bull calves to our Southern friends, and if they buy now, we are going to keep their purchases until fall for shipment. This is very liberal on our part, which we know will be appreciated by our friends south of the fever line. We also breed HACKNEY HORSES, BERKSHIRE HOGS and WHITE WYANDOTTE FOWLS. Let us hear from you. ROSEMONT FARM. We lead, others follow. Berryville, Clarke county, Va.



HEREFORDS (ENTIRE HERD) DORSETS (ENTIRE FLOCK)

A prompt buyer will get a bargain. N. ARMSTRONG Lantz Mills, Va.

EDGEWOOD STOCK FARM.

✂ ✂ DORSETS. ✂ ✂

Our Dorsets all sold again. We urged you to place orders early. Our Fall Lambs will start in October. Will book orders now. We thank our friends for their kind words—"Kind words are more than coronets." J. D. & H. B. ARBUCKLE, Maxwelton, Greenbrier Co., W. Va.

N. B.—We may be persuaded to sell five ewes in lamb.



STOCK SHEEP! - STOCK CATTLE!



Farmers who are intending buying stock or Breeding Ewes had better buy now or during this month to insure early lambs. I CAN FURNISH YOU WITH ANY NUMBER OF GOOD EWES or FEEDING SHEEP of any kind and on short notice.

Write For My Free Catalogue and Price List on The Sheep I Handle. This Explains Everything.

I am receiving each week good STOCK CATTLE and can furnish you any kind you may want. All orders accurately filled and satisfaction guaranteed.

If you have any kind of live stock to sell, ship it to me. I can handle it and highest market value assured.

ROBERT C. BRAUER, Richmond, Va.,

COMMISSION SALESMAN OF CATTLE, HOGS, SHEEP, LAMBS AND CALVES.

Address: P. O. BOX 204. Pens and Office: Union Stock Yards. Residence Phone 5059; Office Phone 993.

hotels and boarding houses in Richmond for \$1 a day up. It is thought advisable to print this before a list of hotels and boarding houses can be compiled. On arriving at Richmond, delegates will be informed as to the location of the secretary by inquiring at the depot master, and the secretary will have at his office full information about hotels and boarding houses.

Under the Constitution of the Farmers' National Congress all delegates are appointed for two years, although their commissions may read for only one year. If this paragraph is marked by blue pencil, the person to whom this is addressed is on the official lists of the secretary as a delegate to the annual session of the Congress at Richmond.

The Scientific American gives the following directions for making "skim-milk" paint: Stir into one gallon of milk about three pounds of Portland cement and add sufficient Venetian red paint powder to impart a good color; any other colored paint powder may as well be used. The milk will hold the paint in suspension, but the cement being heavy will sink to the bottom, so that it becomes necessary to keep the mixture well stirred with a paddle. Mix only enough at a time for one day's use. Six hours after painting this paint will be as immovable and unaffected by water as a month-old paint. Cases are on record of this sort of paint being in good condition after 20 years, and it has preserved the wood admirably. The addition of carbolic acid or some other disinfectant makes it very suitable for dairy work, as it then has a cleansing effect.

It's use in poultry houses has been highly recommended by those who have tried it.

AN IMPERTINENCE.

"Let me see," said the minister, who was filling out the marriage certificate and had forgotten the date, "this is the fifth, is it not?"

"No, sir!" said the bride, with some indignation, "this is only my third!"—Lippincott's.

RED POLLS For Sale

One registered bull. Four Cows, served, 5 years old. Four yearling heifers: the cows and yearlings are high grades, from best English Stock, from $\frac{1}{4}$ to $\frac{3}{4}$ to pure-bred. Will sell at a low price.

Several yearling GUERNSEY BULLS, JERSEY HEIFERS and CALVES.

BERKSHIRE boars ready for service, Sows in pig and pigs, pairs and trios, not akin.

M. B. ROWE & CO., Fredericksburg, Va.

OAK HILL FARM

SADDLE and THOROUGHBRED HORSES,
ABERDEEN-ANGUS and JERSEY CAT-
TLE, BERKSHIRE, POLAND-CHINA, DUROC
JERSEY and TAMWORTH HOGS. ❖ ❖

WHITE PLYMOUTH ROCKS, WHITE HOLLAND TURKEYS, PEKIN
DUCKS and PEA FOWLS. Eggs in Season.

SATISFACTION GUARANTEED. WRITE FOR PRICES.

Shipping Point, Oak Hill, (station on farm) D. & W. Railway 15 miles West of Danville, Va.

SAM'L HAIRSTON, Wenona, Va.

LARGE YORKSHIRES.

The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times. ❖

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

Address

BOWMONT FARMS, Salem, Va.



WOODSIDE BERKSHIRES

EVERYTHING SHIPPED ON APPROVAL

We are now offering some very choice pigs sired by my two great boars, LESTER'S CARLISLE OF BILTMORE, No. 72057, and MASTER LEE OF BILTMORE, No. 79379, and out of sows weighing from 500 to 600 lbs. each, in only fair breeding condition. For the next 30 days I will sell strictly choice pigs at greatly reduced prices, in order to make room for Fall Litters. To show our confidence in what we offer and insure satisfaction to our customers, we will ship pigs ON APPROVAL, and if not entirely satisfactory in every respect, you can return them at MY EXPENSE. In other words you can see the pigs before you buy. Address, WOODSIDE STOCK FARM.

R. S. FARISH, Prop., Charlottesville, Va.

AN APPLICANT FOR SUFFRAGE.

Young Lady (briskly to telegraph operator)—"A blank form, please. What is the rate to Janross?"

Operator—"Regular rates—twenty-five cents for ten words."

Young lady, twenty minutes later, after many erasures and deep study, hands over message.

Operator (reading same)—"Too many words. You'll have to cut out that 'My Dear Herbert,' or pay extra."

Young Lady (with visible excitement)—"Leave it out! Well, indeed, I shall do nothing of the kind. I guess I can call my own husband 'My dear Herbert' if I see fit."

Operator—"Privilege with you, Ma'am. Will cost you six cents extra, though."

Young Lady (angrily)—"Six cents! Why, I could add four cents to that and get a special delivery stamp." Viciously: "It would reach him just about as soon as your old telegraph, anyhow, for he won't get to Janross until this evening."

Operator—"Sorry, Ma'am; rules are rules. If you will have it addressed that way, drop out three words of the message; that will bring it within the limit."

Young lady picks up telegram and studies it intently, with her pretty eyebrows drawn tightly together. Shakes her head despairingly and lays down paper.

"I just can't leave out any of them; he wouldn't understand if I did. And, with a break in her voice, "to just say 'Herbert D. Felton' would seem so cold and distant to him, I know."

Operator (shifting uncomfortably)—"Six cents extra will fix it right, Ma'am. Now, which shall it be."

Young Lady (tearfully)—"I can't cut down the message, and I won't leave out the other." With sudden determination: "Give me another blank. I will not be coerced and bullied by your old rules."

Rapidly writes the following: "Operator refuses to let me address you suitably. Writing instead."

Places a quarter on counter, with "There! ten words. Send that immediately. I'll write a letter to Mr. Felton, and call him just whatever I please."

Sweeps triumphantly from office.—Lippincott's.

Always mention the Southern Planter when writing advertisers.

Baron Premier 3rd 75021,



the head of our herd, was first in his class at World's Fair; weighs 900 pounds at 22 months. His dam is litter-mate to Lord Premier, 50061, selling recently for \$1,500; his sire was premier champion winner at World's Fair at St. Louis. With this great hog and a large line of both imported and American well selected sows and gilts, especially chosen to mate with him, we are actually producing and accomplishing the pleasure of breeding the most magnificent strains of BIG, LONG, WIDE, DEEP, THICK-SET BERKSHIRE HOGS on short legs.

We are now offering a few bred sows and gilts and some three months pigs. It makes no difference how fine hogs you desire to purchase, you

need not go farther than

MAPLE SHADE FARM,

W. H. COFFMAN, Propr. Bluefield, W. Va.

BERKSHIRES FOR SALE

One litter, 12 pigs out of IMPORTED RUDDINGTON DINAH 68324, a superb sow.

One litter 10 pigs out of Lady Longfellow of Forest Home 72587. An unusually prolific sow whose pigs always grow marvelously.

One show sow pig;

One show gilt, bred.

A few Boars and some Boar Pigs.

FOREST HOME FARM, Purcellville, Va.

NOW IS YOUR TIME FOR

BARGAINS



Sixteen service boars, 13 open gilts, four bred gilts, two bred sows and pigs galore. Pigs coming and going almost every day in year. If any of larger size wanted have them booked at once as early September will take them all. Most of these from imported blood on both sides, balance imported on one side.

THOS. S. WHITE,
Passifern Stock and Poultry Farm,
Lexington, Va.

HEEBNER'S "UNION" FEED AND ENSILAGE CUTTERS

HEEBNER'S "UNION" FEED AND ENSILAGE CUTTERS are the most perfect machines ever invented for cutting feed and ensilage. They are made of heavy iron and steel, and are built to last. They are the only machines of their kind that will cut feed and ensilage into small pieces, and are the only machines that will cut feed and ensilage into small pieces, and are the only machines that will cut feed and ensilage into small pieces.

HEEBNER & SONS, 25 Broad St., Lansdale, Pa.



POLAND-CHINAS

A few crack-a-jack pigs of March farrow by my fine boar, Great Big Tecumseh, 62301, who weighed over 500 pounds at 14 months old, just in good growing order. Also 8 to 10 weeks' old pigs sired by a half brother of the senior champion boar at the St. Louis World's Fair. This boar was sired by Corrector, who stands to-day without a peer as a sire of show hogs. One-half interest in Corrector sold for \$2,500. Write for prices, testimonials and references that will convince you I am selling the best Poland Chinas in Virginia, at prices within reach of all. Also SHROPSHIRE RAMS and SMITHSON CALVES. All stock shipped subject to being returned at my expense if not satisfactory. J. F. DURRETTE, Birdwood, Albemarle county, Va.

REPORTS.

U. S. Department of Agriculture, Washington, D. C. Report of Office of Experiment Stations for year ended June, 1903.

Bureau of Chemistry. Bulletin No. 93. Experiments in the Culture of Sugar Cane and its Manufacture Into Table Syrup.

Division of Entomology. Bulletin No. 34. New Series. Principal Insects Liable to be Distributed on Nursery Stock.

Office of Experiment Station. Experiment Station Record, Vol. XVI, No. 11.

Office of Experiment Station. Circular No. 62. List of Abbreviations Employed in Experiment Station Record for Titles of Periodicals.

Bureau of Soils. Circular No. 16. Manurial Requirements of the Cecil Silt Loam of Lancaster Co., S. C.

Summary of Experiments on the Relation of Soil Acidity to Fertility. Forest Service. Circular No. 35. Forest Preservation and National Prosperity.

Farmers' Bulletin, No. 227. Experiment Station Work XXX. Top-Dressing Grass Land. Peanuts for Forage. Poultry-Houses, &c.

California Experiment Station, Berkeley, Cal. Bulletin No. 166. Spraying for Scale Insects.

Bulletin No. 167. Manufacture of Dry Wines in Hot Countries.

Bulletin No. 168. Observations on Some Vine Diseases in Sonoma Co., Cal.

Bulletin No. 169. Field Observations Upon the Tolerance of the Sugar Beet for Alkali.

Colorado Agricultural College, Fort Collins, Colo. Agricultural College Bulletin. First Annual Annual Announcement of the Short Course in Agricultural and Domestic Science.

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Kentucky Experiment Station, Lexington, Ky. Bulletin No. 117. Commercial Fertilizers.

Bulletin No. 118. Corn. Field Tests.

Bulletin No. 119. Labels on Adulterated

POLAND-CHINAS.

I have a limited number of Pigs by my fine Boars, Gray's Big Chief, 57077, and Victor G, 57075, and can furnish pairs not akin or related to those previously purchased. Young Boars and Sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address J. B. GRAY, Fredericksburg, Va.



GRAY'S BIG CHIEF, 57077.

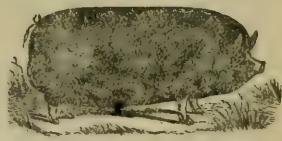
POLAND CHINA AND Tamworth Pigs

entitled to registration; also bred sows at reasonable prices.

APPLY TO J. C. GRAVES, Barboursville, Orange Co., Va.

Large English Berkshires

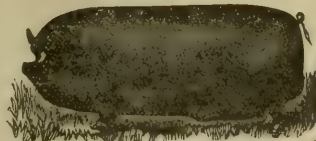
Royally bred pigs, July farrow. Extra nice ones at low prices. Biltmore blood; few young boars ready for service. C. S. TOWNLEY, Red Hill, Va.



We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



A BOON TO THE FARMERS OF SOUTHSIDE VIRGINIA.

Having Purchased at the long price of \$3,000, the splendid

GERMAN COACH STALLION FRANK 2929,

We offer his services to the lovers of fine horses on the following reasonable terms: \$10 single, \$15 the season, \$20 insurance, of which \$2.50 cash, balance when mare is known to be with foal; usual return privilege on failure. Groom's fee, 50c.

Mares kept on pasture at \$3.50; on grain at \$7.50, at owner's risk of fire, etc. Frank is one of the handsomest horses in Virginia, a beautiful bay with black points, stands 17 hands, weighs 1,350; has as much action and activity as a Hackney. The opportunity to raise some very fine horses is now offered to the people of this section. We should be able to offer horse buyers as good stock as can be found in other parts of the State.

GERMAN COACH HORSE BREEDERS ASSOCIATION, Farmville, Va.

W. W. JACKSON, President.

W. G. DUNNINGTON, Vice-President.

H. E. BARROW, Treasurer.

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rated and Imitation Foods Sold in Kentucky.

Louisiana Experiment Station, Baton Rouge, La. Bulletins 1 and 2 of the Louisiana Geological Survey.

Bulletin No. 82. Second Series. The Texas Fever. Cattle Tick Situation and Eradication of the Tick by a Pasture Rotation System.

Bulletin No. 83. Second Series. Results of Further Experiments with Nodule Diseases of the Intestines of Sheep. Bare Lot Method of Raising Lambs.

Michigan Experiment Station, Agricultural College, Mich. Bulletin No. 225. Alfalfa in Michigan.

Bulletin No. 226. The Work at the Sub-Stations.

Bulletin No. 227. Legumes Other Than Alfalfa.

Nebraska Experiment Station, Lincoln, Neb. Bulletin No. 89. Winter Wheat.

New Mexico Experiment Station, Mesilla Park, N. M. Soil Moisture Investigation for the Season of 1904.

Ohio Experiment Station, Wooster, O. Bulletin No. 105. Experiments with Winter Wheat.

Pennsylvania Experiment Station, State College, Penna. Bulletin No. 71. Relative Values of Feeding Stuffs.

Rhode Island Experiment Station, Kingston, R. I. Bulletin No. 104. Plant Peculiarities, as Shown by the Influence of Sodium Salts.

Bulletin No. 105. Commercial Feeding Stuffs.

South Dakota Experiment Station, Brookings, South Dak. Bulletin No. 32. Macaroni Wheat.

Bulletin No. 93. Plums in South Dakota.

Virginia Crop Pest Commission, Blacksburg, Va. Circular to Virginia Nurserymen Relating to Inspection and Shipment of Nursery Stock.

Virginia Weather Bureau, Richmond, Va. Report for July, 1905.

Wyoming Experiment Station, Laramie, Wyo. Bulletin No. 66. Irrigation Investigations on the North Platte in 1904.

A suburban resident of C— was greatly annoyed by the raids of his neighbor's chickens. One Sunday morning he happened to be in the rear of his lot and saw his neighbor in her yard entirely indifferent to the fact that her chickens were merrily digging up his very promising crop of young onions.

"See here, now, Mrs. Murphy," said Mr. C., "I can't stand this any longer. You must either keep your chickens at home, or else I'll cook them for my table. I'm tired of this!"

Mrs. Murphy regarded him for a moment.

"Well," she said, "one thing's certain. You ain't got the love of Jesus in your heart to let a little thing like that bother you on the blessed Sabbath day!"—Lippincott's.

...ROYALLY BRED STOCK...

JERSEYS

Our herd is headed by MARETT'S FLYING FOX, imported son of the famous Flying Fox and GOLDEN PETER, of the celebrated Uncle Peter and Tulip strains.

...FOR SALE....

Several beautiful heifers and splendid bull calves by these bulls, and also by FORFARSHIRE and FLYING FOX'S REX, imported prize winners.

BERKSHIRES

Herd headed by MONTVIEW FAITHFUL, greatest young Berkshire boar ever brought to Virginia. Son of the famous MANOR FAITHFUL, Imp. sold at Baltimore for \$615, weighing 900 pounds.

...FOR SALE....

Some fine pigs by this boar out of royally bred sows. Three beautiful gilts by DORSET LEB OF BILTMORE, and three very handsome young boars ready for service. MONTVIEW STOCK FARM, Box 513 Lynchburg, Va.

The Grove Stock Farm

...HAS FOR SALE...

Holstein=Friesian Calves

of fine breeding and individuality
at remarkably reasonable prices.

Do you want something choice?

N. & W. and Southern Railways.

T. O. SANDY, Burkeville, Va.

WE ARE STILL IN THE BUSINESS—

"HILL TOP" STOCK at Shadwell, Va.

Southdown and Shropshire Sheep, Berkshire Hogs,

B. B. R. Game Chickens, Fox and Deer
Hound Puppies.

We now have very few Berkshire pigs, but what we have are the right kind. Have only a limited number of sheep for sale. Have young hounds of Walker Strain, and a few young ones of Virginia families, that have speed, and the staying qualities. We are hunters and know what good ones are.

We have won more premiums on sheep and hogs at State and County Fairs, than all other breeders in Virginia, combined.

H. A. S. HAMILTON & SONS, Shadwell, Va.

HOLSTEIN FRIESIAN

A choice lot of young stock for sale; some young bulls ready for service, and bull calves sired by DEKOL 2D, BUTTER BOY, 3D, No. 2, and SIR PAULINE CRADDOCK, whose breeding and individuality are unsurpassed.

Also a nice lot of BERKSHIRE PIGS, Biltmore and Flston strains.

Before buying, write us what you want. FASSITT BROS., Sylmar, Md.

ORGANIZED 1832.

ASSETS, \$1,056,360.54

Virginia Fire and Marine

Insurance Company, of Richmond, Va.

Insures Against Fire and Lightning.

All descriptions of property in country and town, private or public, insured at fair rates, on accommodating terms.
AGENCIES IN EVERY TOWN AND COUNTY.

W. H. PALMER, President.

E. B. ADDISON, Vice-Pres't.

W. H. MCCARTHY, Secretary.

DANGER! PREVENT MOSQUITOES.

Henry Beach Needham writes in The Country Calendar for September:

"Because of the serious and often fatal injury it inflicts on man, the most dangerous animal known is the mosquito. Compared with the evil done by the insect pest, the cobra's death-toll is small. This venomous serpent is found only in hot countries, particularly in India, while mosquitoes know no favorite land or clime—unless it be Jersey. Arctic explorers complain of them. In Alaska, it is recorded by a scientist that 'mosquitoes existed in countless millions, driving us to the verge of suicide or insanity.' A traveler on the north shore of Lake Superior, when the snow was several feet deep, and the ice on the lake five feet in thickness, relates that 'mosquitoes appeared in swarms, literally blackening the banks of snow in sheltered places.'

"As to the best methods to employ in ridding a country place, or any other region of mosquitoes, the directions furnished by Dr. L. O. Howard, the Government Entomologist, who has been a careful student of the problem since 1867, are of great value:

"Altogether, the most satisfactory ways of fighting mosquitoes are those which result in the destruction of the larvae or the abolition of their breeding-places. In not every locality are these measures feasible, but in many places there is absolutely no necessity for the mosquito annoyance. The three main preventive measures are the draining of breeding-places, the introduction of small fish into fleshless breeding-places, and the treatment of such pools with kerosene. These are three alternatives, any one of which will be efficacious and any one of which may be used where there are reasons against the trial of the others.

"The quantity of kerosene to be practically used, as shown by the writer's experiments, is approximately one ounce to fifteen square feet of water-surface, and ordinarily the application need not be renewed for one month. * * * On ponds of any size, the quickest and most perfect method of forming a film of kerosene will be to spray the oil over the surface of the water."

VOLUNTARY IMPOSITION.

General Sherman once had occasion to stop at a country home where a tin basin and a roller-towel on the back porch sufficed for the family's ablutions. For two mornings the small boy of the household watched in silence the visitor's efforts at making a toilet under the unfavorable auspices, but when on the third day the toothbrush, nail-file, whisk-broom, etc., had been duly used and returned to their places in the traveler's grip, he could suppress his curiosity no longer, so boldly put the question: "Say, Mister, air you always that much trouble to yo'self?"—Lippincott's.

30 DAY TRIAL OFFER

Any reader of this paper who will remit direct to me for a can or half-can of my remedy at below prices, and will give same a fair trial for 30 days, may have his money returned if at the end of that time he is not satisfied that his hogs have been benefited, that the remedy will do all that is claimed for it, and that it is the best hog remedy he has ever used.

DR. HAAS' HOG REMEDY
is purely a Medicine and not a "Food"

**The Oldest
and Best**

and has a successful record of nearly 30 years, and is the biggest money-maker for hog-raisers known.

It will prevent and arrest disease, stop cough, expel worms, increase flesh, hasten maturity and pay for itself many times over in feed saved.

Twenty-five-pound can, \$12.50; half-can (12½ pounds), \$6.50, prepaid. Prices: Packages, \$2.50, \$1.25, and 50 cents each.

None genuine without my signature on package or can label.

HOG BOOK FREE Latest Revised Edition "HOG LOGY."

My book about hogs will be sent free if you mention the Southern Planter when writing for it. Many new and important subjects have been added, and some of those treated are: The Hog a Money-Maker; Statistics, History, Illustrations, and Descriptions of Breeds; Associations, with Address of Secretaries; Advice on Selecting Location, Breed, Brood Sows, Boars, etc.; Pedigrees; Quarters; Foods; Inbreeding; Marketing; Curing Pork; Fall Pigs; Exhibiting; Anatomy of the Hog, Illustrated; Diseases—more than fifty of the ailments to which the hog is subject plainly diagnosed, with cause, symptoms and treatment, etc., etc.

DR. HAAS' LIVE STOCK REMEDY for Horses, Cattle and Sheep. Carefully prepared under the personal direction of Dr. Jos. Haas, V. S., who has had over 30 years experience in the treatment of live stock.

Endorsed by the most successful breeders and feeders in the country.

Highly concentrated, and quickens the fattening process. Has no equal, and saves its cost in feed.

Prices: Packages, \$1.00, 50 cents and 25 cents each.

TWENTIETH-CENTURY POULTRY FOOD—the greatest egg-producer on the market; keeps fowls healthy, prevents cholera, roup and all poultry diseases.

Best Food on earth for poultry. TRY IT.

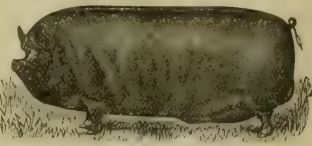
Prices: Twenty-five-pound bags, \$3.50; packages, 25 cents each.

JOS. HAAS, V. S., Indianapolis, Ind.

HILL TOP STOCK FARM

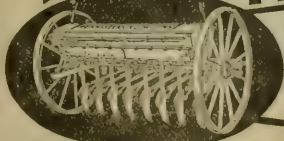
I have increased, and, if possible, improved my stock of royalty bred Berkshire I defy competition either in quality or price. That superb young boar, "Shenandoah Chief," bred by Lovejoy & Son from imported stock with CLARA BELL CHRISTINE and other well known sows are among my herd.

Boars ready for service. Sows and pigs for sale. Write quick. S. BROWN ALLEN, Staunton, Va.



PENNSYLVANIA

**LOW DOWN
GRAIN-FERTILIZER DRILL**



The original and only Perfect Low Down Drill made both with Disc and Hoe. Four foot wheels but frame being hung below axle makes hopper very low. No cog gears to get out of order. Chain drive from axle. Perfect regulation of quantity of grain or fertilizer to be sown without stopping drill. Positively the simplest, lightest running and most accurate drill on the market. Fully guaranteed in every respect.

Write for FREE Catalog of Farm Machinery **A. B. FARQUHAR CO., Ltd., York, Pa.**

ALFALFA INOCULATION

The experience of many would-be Alfalfa growers, goes to show that inoculation by the method of and with the "cottons" furnished by the Department of Agriculture is uncertain to say the least and oftener than not, fruitless of good results. There are easily several ways of just missing the desired result.

With INFECTED soil it is different. The bacteria are already in the soil. We can point to many successes and so far, have not, in two years, been advised of any failures from the use of infected soil from the Ewell Farm experimental plot. Our Advice to alfalfa growers is, to get their soil from a plot, that has shown thorough infection for FOUR years.

We sell this soil, delivered f. o. b. Ewell's station at \$1.00 per bag. Bags contain from 150 to 175 lbs. each. It is shipped as fertilizer and takes the fertilizer rate. You should order and apply at once. Address EWELL FARM, Spring Hill, Tenn.

GEO. CAMPBELL BROWN.
PERCY BROWN.

TO THE BISHOP'S TASTE.

The late Bishop Green on one of his diocesan visitations stopped with an old friend at Sewanee, Tenn.

At the early supper of the South, always a most informal meal, the Bishop said he would have nothing but a dish of bonny-clabber, a little nutmeg sprinkled over.

"There ain't a bit of nutmeg in the house," exclaimed the maid when the request was repeated to her.

"Dear me," said the hostess, sotto voce; "go to Mrs. Darlington next door and ask her to lend me a nutmeg."

Mrs. Darlington also was "out" of nutmeg.

"Then go to Mrs. Harding, on the other side, we can't all be out at once; then bring the Bishop the dish quickly."

The hostess kept up a rapid fire of bright talk to cover the hiatus in the service until the maid appeared with the desired dish.

"What an addition is the little sprinkle of nutmeg," said the Bishop; "what a fine relish it gives."

When the good guest had retired the mistress said to the maid:

"Go to the supply store the first thing in the morning and get nutmegs, and return the nutmeg to Mrs. Harding and—"

"But Mrs. Harding was out of nutmegs, too."

"Then where did you get any?"

"La, Miss, I was dat worried out dat I de tuck the wooden handle to a ole shoe-buttoner an' grated it on."

And the Bishop had relished it. So much for the power of suggestion.—Lippincott's.

STUMP PULLERS.

Mr. Jos. W. Ritchie, State Agent for the Monarch Grubber, has resumed his advertising in this issue. We invite attention to his card. He will take pleasure in quoting prices on his Grubber and giving any other information desired.

FARM MANAGER

Wanted, married man preferred. Must be able to superintend all farming operations. Address, stating age, references, etc., H. G., care Southern Planter.

—WE SUPPLY—

ALFALFA BACTERIA

in the shape of

INFECTED SOIL

from an old two acre Alfalfa plot which has given us 3 or 4 good cuttings yearly for the past six years, and is still doing well. Price, \$1.00 per bag (in 4 bag lots) of about 100 lbs.; more than 4 bags, 75 cents each; f. o. b. Midlothian; soil sifted and ready for use either by hand or drill.

J. B. WATKINS & BRO., Hallsboro, Va.

Sunny Home Angus.

Herd bull BARON ROSEBOY 57666 (a grandson of "Heather Lad 2nd" the greatest breeding bull ever in America), and "JESTER" 66071, (a grandson of "Equestrian," the greatest bull in Scotland.) If you want top Angus bulls come and inspect what is generally conceded to be the best herd in the Southeast. I have the goods, and have sold during the past 6 months more than any other three breeders in this section. Quality tells the story. Write to

A. L. FRENCH, R. F. D. 2, Byrdville, Va.

Farm at Fitzgerald, N. C., D. & W. Ry.

GLEN ALLEN STOCK FARM, Breeder of Aberdeen Angus Cattle.



"The Bulls that have made Glen Allen Famous."

Herd headed by ALLENHURST KING 4, No. 47193, son of McHenry Blackbird 20th, 32499, assisted by POLLY'S ITO, 73790, son of Prince Ito, 50096, the famous \$9,100 bull.

Young Bulls for sale at reasonable prices, fit to head the best of herds, regardless of price or breeding.

W. P. ALLEN, Proprietor,
R. F. D. No. 1, Ewing, Va.

When corresponding with our advertisers always mention the
SOUTHERN PLANTER.

MORVEN PARK.

The Property of WESTMORELAND DAVIS, Esq.

Large White Yorkshires.

LARGE WHITE YORKSHIRE PIGS from prize winning families for sale. Herd headed by imported boar, "Holywell Huddersfield," No. 4850 (A. Y. C.), second prize at Yorkshire Show, England, 1904. These pigs are the English bacon breed; they are prolific breeders, economical feeders, and hardy of constitution. During the month of August the two farrowing sows, imported Sweetest Polly (A. Y. C.), gave birth to 17 pigs, and the sow imported Holywell Empress (A. Y. C.) gave birth to 14 pigs. Orders will now be received for boars and sows from these and similar litters. Also a few imported boars fit to head any herd for sale at reasonable prices.

Reg. Guernsey Cattle.

REGISTERED GUERNSEYS —Herd headed by Imported Top Notch, 9023 (A. Y. C.), a son of Imported Itchen Beda advanced Reg. No. 136, assisted by Mainstays Glenwood Boy, 7607, A. Y. C. (son of Jewell of Haddon), advanced Reg. No. 92. This herd is rich in the blood of Mainstay, Rutila's Daughter, Imported Honoria (Guernsey Champion, first prize at St. Louis), the Glenwood, Imported May Rose and Imported Mashers families. Bulls only for sale. No cows for sale.

Dorset Horn Sheep.

DORSET HORN SHEEP.—Flock headed by the Imported Ram, "Morven's Best," No. 4132 (C. D.C.); first prize at the English Royal in 1904. Sole flock imported. A few ram lambs for sale.

Flocks and herds may be viewed by appointment.

Address

**LIVE STOCK DEPARTMENT, MORVEN PARK,
LEESBURG, LOUDOUN CO., VA.**

SEED OATS FOR SALE

1500 Bushels VIRGINIA GREY WINTER OR TURF.

This is without doubt the best WINTER oat in America. These oats were sown in the fall especially for seed and are guaranteed absolutely true to name, are of a very superior quality and extra heavy. Grown in Albemarle County, in the Piedmont section of Virginia, where the best seed oats obtainable are produced. Samples sent on application.

In order to close out my crop, I will fill orders for the next 30 days at 60 cents per bushel of 32 lbs. F. O. B. here.

WOODSIDE STOCK FARM, R. S. FARISH, Prop., Charlottesville, Va.

BUYING GOOD STOCK.

Editor Southern Planter:

I have no quarrel with any one who differs from me as to the most successful mode of conducting a stock farm, but I will say that our people—I mean Virginians—are nearly fifty years behind our Western brethren as to making money out of live stock, and your section, Eastern Virginia, is behind the Valley, a long distance. I receive letters from parties in Eastern Virginia who will pay enormous prices for hunters, drivers and thoroughbreds, but expect to buy the greatest money-maker—a draft stallion or mare, pure-bred—"for a song." If I were a millionaire, my choice would be light-legged horses, but as I am compelled to breed and rear horses and cattle for a living, and to raise money to educate my children, I prefer a horse that brings the biggest price in the breeder's hands; one that is marketable at any age, and one that needs no high-priced education, &c. The small additional cost of a pure-bred draft-mare over a good grade is so small that the first foal pays the extra cost.

Another mistake made by a great many of our people is that they are looking out for a cheap one of the registered breeds. Now this is certainly shortsighted, as no one can afford to buy "culls" for breeding purposes. It is a source of satisfaction and pride with me to know that in Virginia, Maryland and Pennsylvania my record in the draft classes has been unsurpassed as a breeder, having met and defeated in the show rings of these States not only the best draft horses bred in these sections, but have never yet taken second place to an imported horse, because I bought the best to start with.

JOHN F. LEWIS.
Lynnwood, Va.

Mr. C. M. Harnish is advertising a new implement on another page. It is the Champion Peanut Digger. Peanut growers should investigate the merits of this machine at once. It looks to us like a money-saver.

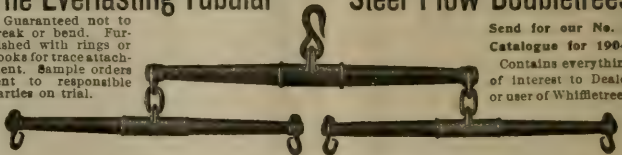
PURE-BRED

HEREFORD CATTLE

for sale, from 3 mos. to 8 years old, including 1 splendid 7 year old bull, thoroughly trained; 2 cows, 2 bulls, 2 years old; 1 bull 1 year old; 1 bull 3 mos. old; 1 heifer 2 years old, and 1 3 mos. old. THE HATTON GRANGE, Hatton, Va.

The Everlasting Tubular

Guaranteed not to break or bend. Furbished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



PATTERN No. 105 EQUIPPED WITH FORGED TRIMMINGS.
Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

Pittsburg Tubular Steel Whiffletree Company,

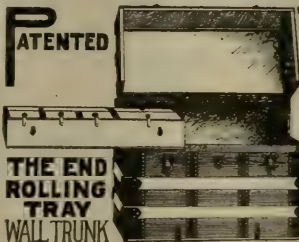
SOLE MANUFACTURERS

PITTSBURG, - - PENNSYLVANIA.

Steel Plow Doubletrees

Send for our No. 8 Catalogue for 1904. Contains everything of interest to Dealer or user of Whiffletrees.

PATENTED



THE END
ROLLING
TRAY
WALL TRUNK

This Trunk Free

Direct from our factory. Large 34 inch size. The most convenient for use at all times. Built for travelling. No heavy top to lift, no heavy tray to take out, sets up against the wall, leaving no space behind for accumulation of dust and various other articles. The very latest designs in covering.

You will be agreeably surprised to know how you can get one FREE by our easy way. Write for full information and return mail will bring it. Write to-day and mention this paper. H. D. THACKER & CO., Sole Manufacturers, Petersburg, Va. Established twelve years.

MANLOVE SELF-OPENING GATE

ALWAYS IN ORDER.

In general use many years. Is guaranteed to work and give satisfaction, all sales made on that basis. It saves time and annoyance. Adds to value, and good appearance of a home and is a good advertisement for any up-to-date prosperous place. Catalogue, MANLOVE GATE CO., 272 Huron street, Chicago, Ill.



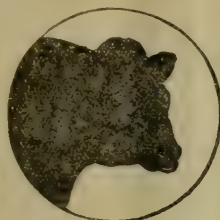
HERE IS A SPECIAL SALE

KING DARE REGISTERED SADDLE STALLION, 4 years old, 16 hands high, weighs 1,100 pounds; a show horse and a great breeder. Eight REGISTERED ABERDEEN ANGUS cows, yearling heifers, bulls and calves, by the great show bull, Beau Blackbird.

POLAND CHINA PIGS, FOX HOUNDS, FOX TERRIERS, SCOTCH COLLIES and BEAGLE HOUNDS. S. C. B. LEGHORN eggs, 50 \$1.00; \$3.25 per 100. J. D. STODGHILL, Shelbyville, Ky.

ANGUS HEIFERS ANGORA GOATS

Angus heifers in calf and with calves by their side, also yearling heifers. They run $\frac{1}{2}$, 31-32, and pure-heifers will be sold at **FARMERS PRICES** if bought at once. They are an exceptionally fine lot of Angus Cattle just the right kind of a bunch to start a herd with; also a registered bull for sale. All fat and in fine shape.



breeds. These be sold at **PRICES** if once. They are exceptionally fine lot of Angus Cattle just the right

We don't claim the earth, but we do claim the **LARGEST** and **BEST** herd of **ANGORA GOATS** in the South. We guarantee perfect satisfaction and can furnish Bucks and Does at exceptionally low prices. We have some very fine Angora Bucks at from \$10.00 up, Does from \$8.00 to \$10.00 each.

We are making a special price on our Surplus Angora Bucks and now is the time to buy your bucks for fall use. Write us and we will quote you any kind from kid bucks to 2 and 3 years old. High grade or registered stock. Our kids are sired by sons of **KINGSTON LAD** the buck that sheared \$81.50 worth of mohair at one shearing, his hair bringing \$5 00 per lb. in New York City.

Diamond V Ranch, Rock Castle, Va.

Virginia Farmers and Stockmen, ALL HAIL!

You are invited to both exhibit at and attend the

GREAT ROANOKE FAIR

CONDUCTED AS A VIRGINIA STATE FAIR, UNDER A STATE FRANCHISE, WHICH WILL BE HELD IN THE CITY OF

Roanoke, Va., September 26, 27, 28 and 29, =1905

—THE BOSS FAIR OF THE SOUTH—

The Premiums Have Been Increased to \$10,000

For Horses, \$1,000; Cattle, \$1,600; Sheep, \$600; Swine, \$600; Poultry, \$500; Farm Products, \$500; Art Work, and Needle Work and Embroidery, \$500; Domestic (Bread, Butter, etc.), \$400; Races, \$4,300; Total, \$10,000.

In addition there are OVER 500 SPECIAL PREMIUMS, consisting of a \$100 buggy, barrels of flour, tons of fertilizers, suits of clothes, saddles and bridles, jewel cases, cash prizes in gold, and subscriptions to popular agricultural, horticultural and poultry journals, magazines, etc (including 12 annual subscriptions offered by the SOUTHERN PLANTER), altogether amounting in value to several thousand dollars.

GRAND PROGRAM OF FREE ATTRACTIONS DAILY—EXCURSION RATES ON ALL RAILROADS—SEVEN HOTELS AND SEVENTY-FIVE BOARDING HOUSES will give Special Rates during the Fair.

RACE CLASSES AND PURSES are as follows: 2.27 trot, \$300; 2.12 pace, \$400; 2.17 trot, \$400; 2.25 pace, \$300; free-for-all, trot or pace, \$600; 2.19 pace, \$300; 2.35 trot, \$250; 2.22 trot, \$400; 2.16 pace, \$400; also four running races, one-half mile heats, \$150; three-fourths mile heats, \$150; one mile heats, \$200; and five-eighths mile heat, \$150; and two hurdle races, $1\frac{1}{2}$ miles and one mile, respectively, each for \$150. There will be ladies' and gentlemen's riding and driving contests, and boys' and girls' riding contests, for cash premiums and valuable special prizes.

ENTRIES CLOSE as follows: For the harness races, Tuesday, Sept. 19th, at 11 P. M., for the running and hurdle races, as well as the riding and driving contests, at 6 P. M., the day before each takes place; for live stock on Saturday, Sept. 23d, at 5 P. M.; in all other departments, on Tuesday, Sept. 26th, at 5 P. M.

FOR PREMIUM LISTS, ENTRY BLANKS, and further information, address the Manager.

JAS. P. WOODS, President.

CYRUS T. FOX, Manager, Box 174, Roanoke, Va.

LOUIS A. SCHOLZ, Secretary.

ROCKBRIDGE PEERLESS PREPARED AGRICULTURAL LIME

Process Patented August 13, 1901.

Packed in 50 lb. Sacks--Easy to Handle.

Can be Drilled With the Seed.

More Efficacious Than Air-Slaked Lime.

Address **ROCKBRIDGE LIME AND STONE CO., Lexington, Va.**

A BAD BREAK.

During the annual convention of a certain religious body, not so very long ago, an incident occurred which was not on the programme and which completely upset the gravity of the ministers and brethren assembled. It was at the closing session, and the chairman stated that they were about one hundred dollars short of an amount desired to be raised for a given purpose, and hoped that the sum could be made up before final adjournment. One of the laymen jumped up with the remark—

"I'll start the good work with twenty-five dollars."

"I don't know your name, brother," said the chairman, "but may God bless you, and may your business be doubled during the year."

Much to his astonishment, a burst of laughter followed from many in the hall, which was explained when a brother up in front stepped to the platform and whispered—

"Why, that's Mr. Blank, a prominent undertaker of the town."—Lippincott's.

LITTLE LOVE TAPS.

At one of the recent White House receptions there was a little case of raper thrusting between two ladies, and it was delightfully entertaining to those who saw and heard.

There was a famous man in Washington, one who came from the plain people and who continues as one of them. He has a beautiful daughter of aristocratic tendencies, who has dug up a family-tree, somehow or other, and who affects superiority which she does not possess in any sense.

The wife of a Congressman from a Western State was introduced to the young lady and pleasantly said:

"I have met with your distinguished father, Miss—"

"I dare say," replied the young lady languidly. "Papa in his position meets all sorts of people."

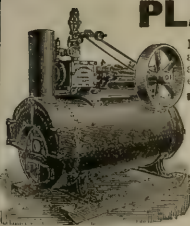
The Western lady flushed and flashed back instantly: "I should suppose so. Especially when he is at home."—Lippincott's.

"Paints that Stay Painted."

PAINT is what you need. Do you know that
PAINT will preserve and improve your property?
PAINT will give your property a prosperous appearance.
PAINT will increase the value of your farm. We have
PAINT on hand for everything—
PAINT for roofs and barns. **LYTHITE COLD WATER**
PAINT Carriage and wagon **PAINT**. Our "Standard" house
PAINT is ready-mixed, and for the money no
PAINT can surpass it. Write us for
PAINT prices and color cards.

JOHN W. ATKINSON & CO.,
 Richmond, Va.

PLANTER'S ENGINES

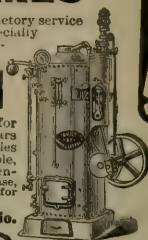


No other power gives such all round satisfactory service as steam. A line of engines and boilers specially adapted to the needs of farmers and planters is

The Leffel

They take but little space, are famous for efficiency, quick steamers, last many years and cost little for repairs. Many styles from 3 h. p. up, include Upright, Portable, Horizontals on skids or for walling in, engines mounted on boilers or with separate base, etc. Don't buy any power until you have sent for our book, "Power Economy and Efficiency."

THE JAMES LEFFEL & CO., Box 154, Springfield, Ohio.



Pulls Stumps or Standing Trees.

Cleaves a two-acre circle with one sitting—pulls anything the wire rope will reach; stumps, trees, grubbs, rocks, hedges, etc. A man and a boy with one or two horses can run the

COMBINATION STUMP PULLER,

Stump Anchored or Self Anchoring.

A minute and a half is all it takes for the ordinary stump. No heavy chains or rods. Note the strong wire rope with patent coupler—grabs the rope at any point. Does not chafe rope; far ahead of old-style "take-ups." Smallest rope—no. 10—stands 40,000 lbs. strain. It generates immense power and it's made to stand the strain. We also make the Iron Giant Grub and Stump machine, the L. X. L. Grubber and Hawkeye Grub and Stump Machine. Write for free illustrated catalogue.

Largest manufacturers of Stump Pullers in the World.
 Established 1884.



MILNE MFG. CO.,
 834 8th St., Monmouth, Ill.



Get Your Share of \$600,000,000



We want to get every corn growing farmer in the country to thinking about the money value of corn stover.

We want every farmer to know that the ears of corn he harvests—that is, the grain—represents only 60 per cent. of the value of his entire crop, and that unless he makes proper use of the whole plant, stalks, leaves and all, he is losing 40 per cent. of his corn profit. This has been proved by chemical analysis and actual feeding trials at many of our Government Experiment Stations.

What we mean by "Get your share of \$600,000,000," is this: The average yearly crop of corn in this country, as shown by the Bureau of Statistics is worth \$900,000,000, and there remains in the plant \$600,000,000, or 40 per cent. of a total of \$1,500,000,000. If you don't harvest the stalks you don't get your share of the \$600,000,000.

Now, don't think of these figures in a hazy way, as if they were based on theory, or as if they were too large to mean anything to you.

They mean actual dollars to you personally. They mean about \$16.00 for every acre you have planted in corn. High authorities place the value of shredded stover at \$8.00 a ton, and at the lowest estimate, each acre ought to yield two tons.

These values, you understand, apply only to the crop that is taken care of properly. The stalks and leaves that are left standing in the field after the corn has reached maturity decrease rapidly in feeding value until they are soon completely bleached out, dried up, and represent practically

nothing but indigestible woody fibre.

Why not apply the same close figuring to your corn crop as you do to all other crops?

If you do this, you will see that it is only a question of cutting your corn stalks at a certain time in order to add from \$10.00 to \$20.00 profit to every acre you harvest.

The whole secret of the double profit method is not to husk your corn in the field, but to cut the whole crop just at the time when the ears are beginning to glaze. Then the ear is complete, and the stalk is at its highest point of feeding value.

If you use a good corn binder you will get over the field rapidly, before any of the nutritious, palatable elements of the plant have time to die out.

After the plant is cut, there is no deterioration of its feeding value, providing the stalks are properly cared for.

The binder puts the fodder in shape to be easily shocked and quickly and profitably husked and shredded.

In actual practice dairymen and feeders find that the corn binder is well-nigh indispensable to the man who wishes to get all the profit out of his corn crop. This is true no matter whether the corn is to be shredded into stover or put into the silo.

While you are not going to buy a corn binder because we ask you to, if you will figure out the value of corn stover in actual dollars and cents, you will appreciate the wisdom of saving it. If you then want a corn binder or husker and shredder, our agent will be pleased to talk to you.

... YOU HAVE THE CHOICE OF ...

McCormick, Milwaukee, Osborne Deering, and Champion Corn Binders

McCormick, Deering and Plano Shredders

MADE BY THE

INTERNATIONAL HARVESTER COMPANY.

In each of these machines you will have all the advantages made possible by the unequalled manufacturing facilities of the INTERNATIONAL HARVESTER COMPANY. The International Harvester Company owns its own timber lands and saw mills, its own iron and coal mines, its own coke plants and rolling mills from which it produces a large percentage of all raw material used selecting in every instance only the best material and working it out in the best way in the above great manufacturing plants. These are advantages which no buyer can afford to overlook.

REMEMBER: The International lines are represented by different dealers. See them for catalogues.

A BOLD, BAD BOOK AGENT.

One day an enterprising agent who had informed himself approached a Mr. Smith with the interested suggestion:

"Now, Mr. Smith, I know that to-day is your wedding anniversary. Don't you want to give Mrs. Smith a handsome bible as an anniversary present? I can let you have to-day a beautiful fifteen-dollar Bible for five dollars."

After some discussion Mr. Smith took the Bible. Just here the plot thickens. The Book agent pocketed the proceeds, then promptly ran up to Mr. Smith's house, called for Mrs. Smith, and asked if she wouldn't like to make her husband a present of a fine Bible on this anniversary. He said that, as he was anxious to dispose of all his books before going to Cleveland at six o'clock, he would sacrifice a beautiful fifteen-dollar Bible for five dollars. After some hesitation Mrs. Smith bought the Bible.

When Mr. Smith reached home that evening and presented his wife with a large package containing an anniversary gift she went into the next room and produced its mate.

Tableau! Smith vowed vengeance with all the heat of a warm disposition. However, there was a fine festival supper waiting, so he contented himself for the present with a telephonic appeal to one Lewis Johnson, a nearby friend.

"Lewis," he urged, "I want you to hurry down to the station and stop a book agent who is going to Cleveland at six o'clock. I must see him before he leaves town. You just hold him till I can finish supper and get there." Then he gave a brief description of the man and rushed back to supper.

The good Lewis hopped on a passing car and swept down upon the book agent just as the train pulled in.

"See here," he explained, "Smith says that he must see you and that you are to wait over a train for him."

"Sorry; I'd like to oblige him, but it's impossible. I'm due in Cleveland at eight-thirty and have got to be there. But I know what Mr. Smith wants. He was thinking of buying a Bible of mine for his wife's anniversary present. It's really a handsome book, which I usually sell for fifteen dollars, but as it is the last one I have, I offered it to him for five dollars (producing the Bible). "He was to let me know if he wanted it. Couldn't you take it to him, as I can't possibly wait? He'd be disappointed not to have it, I know."

The obliging Lewis thereupon hastily produced five dollars for the agent, acquired the Bible, and with the best intentions in the world trotted back to the Smiths with the book.

Second tableau! Fortunately their sense of humor saved the situation, and with chastened spirits they display all three books of Holy Writ to the initiated.—Lippincott's.

Mention THE SOUTHERN PLANTER in writing.



..ELMWOOD NURSERIES..

—WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF—

APPLES, PEACHES, PEARS, CHERRIES, PLUMS, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 15. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J B. WATKINS & BRO., Hallsboro, Va.



Water Supply for Country Homes

Deliver water from spring or stream to house, stable, lawn, storage tank, etc., by the automatic working

RIFE HYDRAULIC ENGINES.

Always going without attention. Raises 30 feet for every foot fall. 80 per cent. efficiency. Large plants for irrigation, equipping towns, railroad tanks, etc. Over 5,000 in use. Catalogue and estimates free.

RIFE ENGINE CO., 126 Liberty St., New York, N. Y.

CHARTERED 1870.

Merchants National Bank,

OF RICHMOND, VIRGINIA.

Capital,	- - - - -	\$200,000.00.
Surplus,	- - - - -	\$500,000.00.
Undivided Profits,	- - - - -	\$230,000.00.

Depository of the United States, State of Virginia, City of Richmond.

Being the largest depository for banks between Baltimore and New Orleans, we offer superior facilities for direct and quick collections. Accounts solicited.

JOHN P. BRANCH, Pres. JOHN K. BRANCH, Vice-Pres. JOHN F. GLENN, Cashier.
Assistant Cashiers: J. R. PERDUE, THOS. B. MCADAMS, GEO. H. KERSEE.

Three Per Cent. Interest Allowed in Savings Department.

SALES AT SUNNY HOME.

The Southern Planter:

Gentlemen,—I wish to report recent sales of Angus as follows: To Mr. W. R. Walker, Union, S. C., four yearling heifers; this is Mr. Walker's third purchase of registered cattle; he buys nothing but the tops, and certainly got quality to burn in this last lot—two of them first-class show heifers.

Mr. J. M. Brown, Appalachia, N. C., took a pair of Westertown Rose heifers—same strain of blood as the lamented Champion Rosegay. One of these is the thickest young cow on the farm, and the pair would be a credit to any herd.

Mr. R. J. Ostrander, Edgewood, Va., decided to try a "Rose of Advia," grandson of the great Erica bull "Ermoor."

Mr. J. W. Menefee, of Greensboro, N. C., secured another "Rose of Advia" bull, out of one of the best cows in the herd.

The Thacker Dairy Co. thought the Violet bull Carolinas Gay Boy would suit them.

Mr. D. F. Dunlop, of Boxwood, Va., secured in the Queen Mother bull, Baron Ida 7, what is probably as good a beef bull as there is in the South, and his breeding is the most fashionable. To go with this bull, Mr. Dunlop selected one of the best young daughters of Baron Rosebery.

Mr. P. B. Neal, Madison, N. C., in his personal selection of the fine Westertown Rose bull, Thomas Guy secured a bull that will do a lot of good in his neighborhood. He comes from the same maternal strain as the Champion Rosegay.

Mr. C. T. Johnson, of Beaver Dam, Va., secured three heifer calves that are hard to turn down. A Coquette daughter of Baron Rosebery is an especially fine animal; in fact, the three heifers are all of the right soil. Mr. Tait Sterritt, of Hot Springs, Va., will try another grandson of the great Ermoor.

Mr. Jefferson, of Danville, Va., selected a grandson of Imp. Corskie's Lad to go onto his farm, just purchased on Dan River. This young bull, I think, will give a good account of himself, as in breeding and individuality he is all right.

Mr. H. J. Fitts, of Byrdville, Va., selected a Pansy bull that is a perfect black. I am glad to give the Southern Planter credit for most of my cattle sales, and beg to remain,

Yours very truly,

A. L. FRENCH.

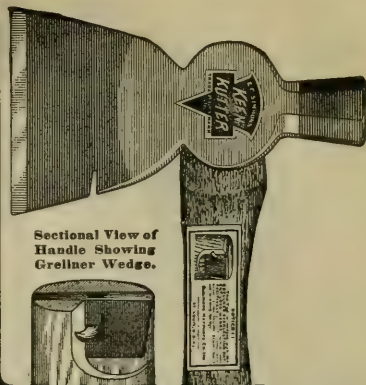
"A BUNCH OF DAISIES."

This is the title of a very attractive little booklet issued by the Page Woven-Wire Fence Co. in the interest of their well-known fence. This company, by the way, has advertised with us for a number of years, and hundreds of our readers have bought this Fence, and we cannot recall a single complaint of it.

Long Lived Tools

Keen Kutter quality tells in the long life of Keen Kutter Tools as well as in better work and greater satisfaction. It is not an unusual thing for Keen Kutter Tools to be passed down from father to son, so long do they last.

The long life of Keen Kutter Tools compared with the short term of service of inferior brands makes Keen Kutter Tools by far the least expensive tools that you can buy. The



Sectional View of Handle Showing Grellner Wedge.

KEEN KUTTER

trademark covers every kind of tools so that you may always be sure of highest quality by insisting upon Keen Kutter Tools.

An example of the Keen Kutter excellence is found in Keen Kutter Hatchets and Handled Axes. These are made of the highest grade of steel, on the most approved lines, and by the best workmen. Every Keen Kutter Hatchet and Axe has the handle wedged with the Grellner Patent Everlasting Wedge which positively prevents the head ever flying off or working loose, and is sharpened ready for use. These are exclusive Keen Kutter features.

Some of the other kinds of Keen Kutter Tools are: Axes, Adzes, Hammers, Hatchets, Chisels, Screw Drivers, Auger Bits, Files, Planes, Draw Knives, Saws, Tool Cabinets, Scythes, Hay Knives, Grass Hooks, Brush Hooks, Corn Knives, Eye Hoes, Trowels, Pruning Shears, Tinners' Snips, Scissors, Shears, Hair Clippers, Horse Shears, Razors, etc., and Knives of all kinds.

If your dealer does not keep Keen Kutter Tools, Send for write us and we will see that you are supplied: Tool Booklet.

Every Keen Kutter Tool is sold under this Mark and Motto:

"The Recollection of Quality Remains Long After the Price is Forgotten."

Trade Mark Registered.

SIMMONS HARDWARE COMPANY,

St. Louis, U. S. A.

296 Broadway, New York.

The Chesapeake & Ohio Railway

Extending from Cincinnati and Louisville, and

THROUGH ITS CONNECTIONS....

THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;
THE OHIO CENTRAL LINES, from Toledo and Columbus;
THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest ROUTE.

TO STAUNTON, LYNCHBURG, CHARLOTTESVILLE,
RICHMOND, PETERSBURG, NORFOLK,
And Principal Virginia Points.

H. W. FULLER, Gen. Pass. Agt. C. & O. Ry., Washington, D. C.

AMERICAN REVIEW OF REVIEWS.

Contents for September.—President Roosevelt and the Peace Envoys of Russia and Japan. Frontispiece. The Progress of the World. Record of Current Events, with portraits and other illustrations. Some Cartoons of the Month. Sergius Witte, by E. J. Dillon. European Alliances and the War, by Frederic Austin Ogg. Ryan: A New Power in Finance, by "An Observer in Wall Street," with portrait of Thomas Faulkner Ryan. Denmark the Buffer State of the North, by Julius Moritzen, with portraits, maps and other illustrations. Oklahoma, a Vigorous Western Commonwealth, by Clarence H. Matson, with illustrations. The Age of Gasoline, by F. K. Grain, M. E., with illustrations. The Sea-Air Treatment for New York's Bedridden Children, by Harry Jones, with portraits and other illustrations. Blending Legal Systems in the Philippines, by Charles Summer Lobingier. The New Salaried Class, by Elisia Jay Edwards. Leading Articles of the Month, with portraits and other illustrations. Briefer Notes on Topics in the Periodicals.

A Cincinnati man was describing the dinner in London that admitted Joseph H. Choate to the Society of the Old Benchers of the Inner Temple.

"Mr. Choate was in his best mood," he said. "With epigrams, witticisms, and anecdotes he kept the table in a continuous roar."

"Perhaps he made his most telling impression with a story about an impoverished young Irish gentleman, the Hon. Denis Bellew."

"He said that Mr. Bellew, driven forth by poverty from his father's estate, went to London to seek his fortune."

"He had been a gay, convivial blade, and in the little home village he was missed. There was not a poacher nor a roisterer within ten miles that hadn't a soft spot for Denis in his heart."

"Word one day passed about that up at the castle news had been received of Denis. The village at once became excited, and a deputation of a half dozen or so was soon on its way to see the old lord."

"My Lord," said the spokesman, "is it true ye've got news o' yer son Denis?"

"Aye, true enough. News at last, boys," said his Lordship.

"Faith, then, an' phwat might the boy be doin' up in London?" was the next question.

"He has been called to the bar," the Lord answered proudly.

"The deputation looked at one another, for the phrase was new to them. Finally, in a loud whisper, one said:

"O! don't know what thot manes; but from what O! remember of the boy, he didn't want no callin'."

RUBEROID ROOFING



STANDARD FOR 14 YEARS.

The oldest prepared roofing on the market, and the first Ruberoid Roofs laid, many years ago, are still giving satisfactory service under the severest climatic and atmospheric conditions

Contains no tar or paper; will not melt, rot or tear. Acid fumes will not injure it. Outlasts metal or shingles. Any handy man can apply it.

There is only one Ruberoid Roofing, and we sell it. You can verify its genuineness by the name on the label and on the under side of every length of Ruberoid Roofing. Send for samples and booklet.

A large stock of Corrugated and V Crimp Roofing always on hand.

Southern Railway Supply Co.,

1323 East Main Street
RICHMOND, VA.



Steel Roofing, \$1.50 Per 100 Sq. Feet

Painted red both sides; most durable and economical covering for roofing, siding or ceiling, for barns, sheds, houses, stores, churches, cribs, poultry houses, etc.; easier to lay and cheaper than any other

material, no experience necessary to lay it—a hammer or hatchet the only tools you need. At this price

WE PAY THE FREIGHT Territory. At this price we furnish our No. 15 semi-hardened flat steel roofing, sheets 24 inches by 24 inches. At \$1.60 this same material corrugated as shown in illustration, or in "V" crimped, or standing seam. At 50 cents per square advance over above prices we will

furnish this material in 6 and 8 feet long; \$2.25 for brick siding or beaded ceiling or siding. Send us your order for immediate shipment. Time will prove its enduring qualities. It withstands the elements the best of all coverings. Ask for further particulars. WRITE FOR FREE CATALOGUE NO. A. M. 166

on building material, wire, pipe, plumbing material, furniture, household goods, clothing, etc. We buy at SHERIFFS' AND RECEIVERS' SALES, 100,000,000 feet of lumber from the World's Fair.

CHICAGO HOUSE WRECKING CO., 35th and Iron Sts., CHICAGO, ILL.

DON'T BUY GASOLINE ENGINES

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline engine superior to any other of its kind. It is small, portable, and cheap. THIS IS OUR FIFTY-FIRST YEAR.

all one cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost—portable, stationary or traction. Mention this paper. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mfrs., Meigs & 15th Sts., Chicago.

POINTED PARAGRAPHS.

Some men feel more at home when away.

Men admire clever women, but seldom marry them.

If you would succeed, learn to know what you can't do.

A pretty girl can teach a man anything but common sense.

Heads of households are the bill-footers of their families.

No man over 50 should marry a woman who isn't a good nurse.

A man's mental balance isn't synonymous with his bank balance.

Marriage of two deaf-mutes should render them unspeakably happy.

It is a case of intellectual farming when a man's feelings are harrowed.

If a girl gets but one letter a year, she always reads it on the street.

Men bet on horses, but horses never bet on men. Horses have horse sense.

With a male cynic it's liver trouble; with a female cynic it's heart trouble.

At least half the people who go to law are fully convinced that justice is blind.

An exclamation of joy comes 4th when a mother discovers her baby's 1st 2th.

Every time a very young man's liver gets to acting up he imagines he's in love.

If you would be a social favorite, study your own faults more and other people's less.

A married man never fails to get his wife's undivided attention when he talks in his sleep.

Young man, don't get discouraged if your best girl treats you like a dog. Perhaps she likes dogs.

Honest, now, doesn't it tickle you to have other men try on your hat and find it too large for them?

MONTVIEW STOCK FARM.

Among the new advertisers in this issue, is the Montview Stock Farm, of which the Hon. Carter Glass, of Lynchburg, is proprietor. Mr. Glass has established splendid herds of Jerseys and Berkshires, bred in the purple, or "royally bred," as his ad expresses it. That he is going to disseminate this fine stock throughout this section, at reasonable prices, is demonstrated by his quotations and offerings. Look up the advertisement.

DR. HAAS' HOG REMEDY.

Among the most conspicuous advertisements in this issue is that of Dr. Jos. Haas, of Indianapolis. He has been selling his well-known Hog Remedy for over 30 years, and has thousands of testimonials from swine-raisers all over the country as to its value. His splendid Hog Book, "Hogology," recently revised and brought up to date, will be mailed free to all applicants. We invite our readers to consult this ad and avail themselves of Dr. Haas' liberal offer. If you raise a single hog, you should have the book.

24
YEARS
WEAR
NO
REPAIRS

SEPARATOR

FACTS

43
YEARS
WEAR
75¢
REPAIRS

Just facts—that's all you want. Facts can't hurt you nor Tubular Cream Separators.

Facts prove Tubulars outwear all other makes five to ten times over.

On August 2d, 1904, we started a No. 9 hand driven Dairy Tubular, rated capacity 900 lbs. per hour, on the hardest test a separator was ever put to—an endurance test to last until the wearing parts give way. This Tubular has now run 50 hours a week for 43 weeks—and is still running. Every week of this test is equal to a year's service in a ten cow dairy. No other separator made could stand such a test.

24 Years' Work—No Repairs	43 Years' Work—75¢ Repairs
Hours run.....	2,150
Pounds separated.....	1,935,000
Turns of crank.....	5,652,070
Turns of bowl.....	1,864,000,000
Oil used.....	5½ quarts
Time oiling.....	About 7 min.
Time adjusting.....	10 min.
Repairs.....	75 cents

After 24 weeks, the balls in the frictionless bearing supporting the bowl showed wear. This was natural, for each had rolled over 32,000 miles. Renewing balls cost only 75 cents and ten minutes adjusting, yet made this Tubular as good as new. All Tubulars are equally durable. Catalogue P-290 tells about them. Write for it today.

THE SHARPLES SEPARATOR CO.

Toronto, Canada West Chester, Pa. Chicago, Illinois



Caldwell's Vapor Cooled Gasoline Engine, is a Twentieth Century Invention.

A Gasoline Engine without a Water Tank, and the only Vapor Cooled Engine in the WORLD.

NO FREEZING.

Guaranteed to be built of good material. Entirely dust proof.

The Best Engine for Farmers and Blacksmiths.

Write for circulars and prices.

You will be surprised.

Agents wanted everywhere.

LLOYD R. PEERY,
Eastern Sales Agent,

STEPHENS CITY, - VIRGINIA.

An extra heavy fence. Every wire—both strand and stay—No. 7 gauge. Thickly galvanized. Best grade steel. We mail free sample for inspection and test. A more substantial, stock-resisting, time-defying fence was never stapled to posts.

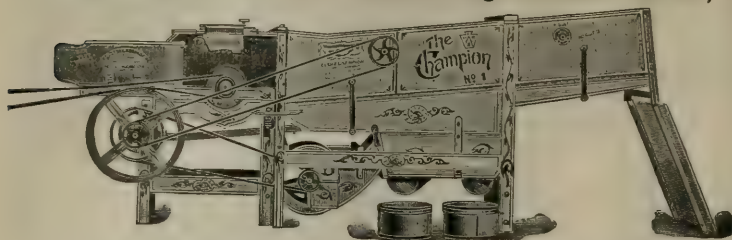
WE PAY FREIGHT ON 40 RODS
Write for book showing 110 styles.
Brown Fence and Wire Co.,
Cleveland, Ohio

BROWN FENCE

16c to 35c
Per Rod—Delivered

SAMPLE FREE

Ellis Champion Grain, Peanut and Cow Pea Thresher, MANUFACTURED BY Ellis Keystone Agricultural Works, Pottstown, Pa.



We make four sizes of
**Grain and
Peanut
Threshers
and Cleaners**

NOS. 1, 2, 3, AND 4, FOR EITHER STEAM, LEVER OR TREAD POWER.

All of which are guaranteed to give entire satisfaction. Our THRESHERS and CLEANERS have been thoroughly tested throughout the United States, and pronounced by the growers of GRAIN, PEANUTS, BLACK and COW PEAS as the most complete and satisfactory Thresher of the period. No grower of any of the above can afford to be without one.

For Catalogue and any information desired, write to

GEO. C. BURGESS, Gen'l Southern Agent, Burgess, Dinwiddie Co., Va.

PREMIUM LISTS.

Interstate State Fair Association, Lynchburg, Va. List of premiums offered at the first annual exhibition to be held at Lynchburg, Va., October 3, 4, 5 and 6, 1905. Frank A. Lovelock, Secretary, Lynchburg, Va.

Roanoke Fair, Roanoke, Va., September 26, 27, 28 and 29, 1905. Premium list and rules and regulations. Louis A. Scholz, Secretary, Roanoke, Va.

American Royal Live Stock Show, Stock Yards, Kansas City, Mo., October 9-14, 1905. Premium list. C. R. Thomas, General Manager, Kansas City, Mo.

CATALOGUE.

Milne Mfg Co., Monmouth, Ill., makers of Grub and Stump Machines for clearing timberland.

A quack doctor, whose treatment had evidently led to the death of his patient, was examined sternly by the coroner.

"What did you give the poor fellow?" asked the coroner.

"Ipecacuanha, sir."

"You might just as well have given him the aurora borealis," said the coroner.

"Well, sir, that's just what I was going to give him when he died."

In an address before the meeting of the South Dakota sheep-breeders recently, Mr. Frank Cronk said: "In buying your ram, get one as nearly perfect as possible. Don't be afraid to spend a few dollars in finding him. When I started in the sheep business I wrote a noted Canadian breeder, describing the ram I would like to buy. He replied: 'If I had as good a ram as that I would use him myself.'"

THE NEW AMERICAN SAW MILL

Variable Friction Feed
Ratchet Set Works, Quick Re-
ceder, Duplex Dogs, Strong,
Accurate and Reliable

Best Material and Workmanship, LIGHT RUNNING, Requires Little Power, Simple, Easy to Handle, Won't Get Out of Order.

With 4 H. P. Steam or Gasoline Engine Guaranteed to Cut 2,000 Ft. Per Day
\$150 Says it on cars at factory, Freight Very Low.

Seven Other Sizes Made. Also Edgers, Trimmers, Shingle Machines, Lath Mills, Rip and Cut-Off Saws, Drag Saws, Cord Wood Saws and Feed Mills. Catalogue Sent Free.

On January 31, 1905, W. H. Greenwood, of Bennington Vt., said: "I am using your No. 3 Saw Mill with a 15 H. P. Engine and average 8,000 feet per day. I am very much pleased with your machinery."

AMERICAN SAW MILL MACHINERY COMPANY, 636 Engineering Building, New York, N. Y.
Agents in Richmond, Norfolk, Lynchburg and Wytheville, Va.
THE WATT FLOW CO., General Agents, Richmond, Virginia.

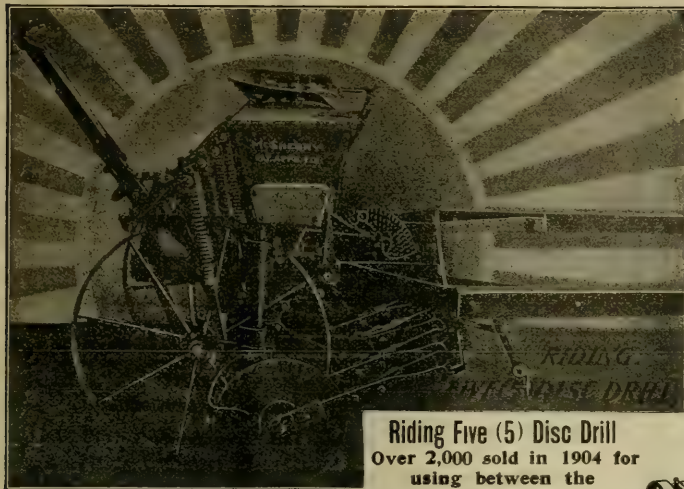
THE SEABOARD AIR LINE RAILWAY

**OFFERS
PROFITABLE
INVESTMENTS**

**THE MANUFACTURER,
THE STOCK RAISER,
THE DAIRYMAN,
THE FRUIT GROWER,
THE TRUCKER.**

TO —————>

J. B. WHITE, EDW. W. COST, CHARLES B. RYAN,
Gen. Industrial Agt., Portsmouth, Va. Traffic Mgr. Gen. Pass. Agt., Portsmouth, Va.



Riding Five (5) Disc Drill
Over 2,000 sold in 1904 for
using between the
corn rows.

With Grass Seed Attachment. With 3-Row Garden Seed Attachment. With 2-Row Corn Drill Attachment.

For the Farmer, Truck Farmer and Gardener. Plain or Fertilizer.

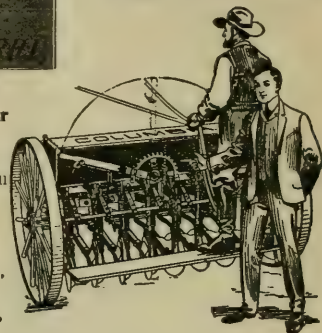
Both Largest and Oldest Independent Grain Drill Factory in the United States. Factory Established 1858.

CAPITAL. \$1,000,000

INDEPENDENT.

WRITE FOR CATALOGUE "R"

FETZER & CO., Middletown, Ohio.



America's 20th Century-Line

...DON'T USE...

OUT-OF-DATE MACHINES

THE ONLY COMPLETE DISC DRILL

Patented Longitudinal Lever

1. Out of the way for filling Hopper
2. For storing away for winter.
3. For using with Foot-board or Gang Press Wheels.
4. Easier to operate at all times.
5. Easy to operate when sitting on Hopper.

Judge Shelby, of Alabama, according to the Buffalo Commercial, was once talking about the difference between swearing and affirming. Whatever the difference is, he said, it is assuredly not what a certain old colored man understood it to be last week. This colored man, entering the witness box, said he thought he wouldn't swear. He thought he would just affirm.

"Erastus," I said, "how is this? A month ago, when you appeared before me, you consented readily enough to swear. Why is it that you will only affirm now?"

"Well, yo' honah," said Erastus, "de reason am dat I specks I ain't quite so sure about de facks o' dis case as I wus o' de odder."

An Aberdeen gentleman, who so-journed at a summer resort in the Highlands for the benefit of his health, called on the doctor for consultation, and in course of a day or two called again to settle his fee. When the doctor inquired regarding the progress of his health, the Aberdonian asked how much was to pay. "Your first consultation," replied the doctor, "is 5s., and to-day's 2s. 6d." "Do you think," replied the Aberdonian, sharply, "I'm going to pay you half a crown for coming in to pay you 5s.?"

"PLANET JR." FARM AND GARDEN TOOLS

Seed Drills and Wheel Hoes combined. Single Wheel Hoes, Double Wheel Hoes, Cultivators, Horse Hoes, Sulky Cultivators.

"Planet Jr." No. 8 Horse Hoe & Cultivator

here illustrated, is the most complete of its kind ever offered to the farmer. It is stronger in design and construction. The amount of work and variety of uses to which it may be adapted will only be appreciated and realized after using one for a season.

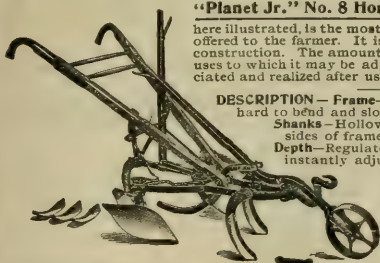
DESCRIPTION—Frame—Extra long and high—hard to bend and slow to clog.

Shanks—Hollow steel and clamping both sides of frame, strengthening each.

Depth—Regulated by wheel and runner, instantly adjusted by lever.

Expansion—By lever from 9 to 25 inches.

Side Hoes—Arch taking from and putting to the crop. Set at all angles and are reversible. Can be removed and small steels put on.



"Planet Jr." Catalogue—Postage free to anyone, also our own illustrated catalogue. Trade discount to dealers on all Planet Jr. goods.

FULL LINE FARM TOOLS AND SUPPLIES

Norfolk Farm Supply Co.

WHOLESALE AND RETAIL

Address Care Dept. No. 6.

41-51 Union St., Norfolk, Va.

CLUBBING LIST.

In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

DAILIES.

	With Alone.	S. P.
Times-Dispatch, Richmond, Va.	\$5 00	\$5 00
Times-Dispatch (without Sunday)	3 00	3 00
News-Leader, Richmond, Va.	3 00	3 00
The Post, Washington, D. C.	6 00	6 00
The Sun, Baltimore, Md.	3 00	3 40

THRICE A WEEK.

The World, New York	1 00	1 25
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WEEKLIES.

Times-Dispatch, Richmond, Va.	1 00	1 25
Central Presbyterian, Rich- mond, Va.	2 00	2 25
Religious Herald, Rich- mond, Va.	2 00	2 25
Southern Churchman, Rich- mond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	3 00	1 50
Country Gentleman	1 50	1 75
Hoard's Dairyman	1 00	1 30
Horseman	3 00	3 00

SEMI-MONTHLY.

Kimball's Dairy Farmer ...	1 00	75
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MONTHLIES.

The Century	4 00	4 25
St. Nicholas	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's	3 00	3 25
Frank Leslie's	1 00	1 25
Cosmopolitan	1 00	1 25
Everybody's	1 00	1 25
Munsey	1 00	1 25
The Strand	1 00	1 25
Madame	1 00	1 00
Argosy	1 00	1 25
Review of Reviews	3 00	3 00
Field and Stream	1 50	1 50
Woman's Home Companion ..	1 00	1 25
Reliable Poultry Journal ..	50	75
Poultry Success	1 00	75
Blooded Stock	50	65
Successful Farming	1 00	60
Southern Fruit Grower ...	50	85
Shepherd's Criterion	50	75
Commercial Poultry	50	75

When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with Southern Planter."

We cannot under any circumstances furnish sample copies of other publications.

We will cheerfully quote our best price on any list of publications submitted to us.

Seed House of the South.

RED CLOVER,
HAMMOTH CLOVER,
CRINSON CLOVER,
WHITE CLOVER,
LUCERNE CLOVER,
ALSKE CLOVER,
BOKHARA CLOVER,
JAPAN CLOVER,
BUR CLOVER,



TIMOTHY,
ORCHARD GRASS,
RED TOP or HERDS GRASS,
KENTUCKY BLUE GRASS,
RANDALL GRASS,
TALL MEADOW OAT GRASS,
JOHNSON GRASS,
GERMAN MILLET,
BUCKWHEAT,
OATS and
CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are

RAGLAND'S PEDIGREE TOBACCO SEEDS.

WE ALSO SELL

Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods.
Samples sent by mail when desired.

Wm. A. Miller & Son,

1016 Main Street,
LYNCHBURG, VA.

Headquarters for Nursery Stock.

WHOLESALE
AND
RETAIL.

We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

Apples,	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

AGENTS WANTED.

FRANKLIN DAVIS NURSERY CO., Baltimore, Md.

Lee's Prepared Agricultural Lime

... FOR ...

Wheat, Oats, Clover, Alfalfa and other Grasses

HAS BEEN USED SUCCESSFULLY FOR 25 YEARS.

Our High Grade Bone and Potash Special Wheat Fertilizer

HAS GIVEN GOOD RESULTS WHERE USED.

Our new WHEAT and GRASS GROWER is prepared on a formula based on experiments of 5 years.

ANALYSIS:

Phosphoric Acid (Thomas Basic Slag),	8 per cent,
Ammonia, - - - - -	1 per cent.
Potash, - - - - -	3 per cent.

We strongly recommend this preparation for Wheat, Oats, Rye, etc.

We have for sale imported THOMAS BASIC SLAG. Plain Shell Lime constantly on hand at lowest prices.

No. 1. Wood Burnt Lime, in car lots at lowest market price from kilns.

A. S. LEE & SON CO., Inc.,

108 South 13th Street.

RICHMOND, VA.

A story is told of one of the Vanderbilts being out automobiling. While going along a quiet country road, the driver of the car saw ahead of him an old farmer walking along by the roadside, and also a dog. The dog was not quite contented to remain on one side, but kept going from side to side, and, unfortunately, was caught by the car as it sped on and was instantly killed.

The driver turned back as quickly as possible to find out what damage had been done, and found the old farmer gazing sorrowfully at the remains of the dog. Vanderbilt took out his pocketbook, gave the farmer a fifty-dollar bill, and asked him if that would repay him for the loss of the dog. The farmer said "yes," and the car started and was soon lost to view.

The farmer stood beside the remains for some few minutes, and then, scratching his head, said in an undertone: "Wonder who that dog belonged to?"—Boston Herald.

Doctor J. Everist Cathell, a clergyman of Des Moines, Iowa, was spending a few days in Montreal while out on a holiday. He visited the different churches, and in one of them noticed an odd arrangement of the prayer-desks. He wanted to understand the reason, he looked around for the sexton. No one was about except a

workman in the rear of the church. Approaching him, Dr. Cathell said: "My man, I am an American clergyman and have found much of interest in these Canadian churches. But there is something here that I do not understand. Can you tell me if this is 'High Church' or not?" The workman considered the ques-

tion seriously for a moment, and then replied:

"I never heard that question asked before, sir; but I believe it is thirty-five feet to the ridge-pole."

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

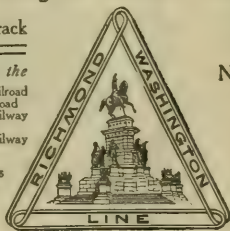
Richmond, Fredericksburg & Potomac R. R. and Washington Southern Railway

The Double-Track
Link

Connecting the

Atlantic Coast Line Railroad
Baltimore & Ohio Railroad
Chesapeake & Ohio Railway
Pennsylvania Railroad
Seaboard Air Line Railway
Southern Railway

Between All Points
via Richmond,
Virginia, and
Washington, D. C.



W. P. Taylor, Traffic Manager

The Gateway
between the
North and the South



Fast Mail
Passenger
Express and
Freight Route

Improvement of cattle has been made by improved care and improved feeding in connection with careful selection and breeding. Take away the improvement in care and feeding, and selection and breeding will avail very little. The whole object of improvement is not to develop a class of cattle that will withstand rough treatment and scanty fare, but to develop animals that will make the greatest possible profit when given the very best treatment and fed in the most skillful and liberal manner, and it is little use for any one to begin to improve his cattle unless he first realizes thoroughly that he must improve the conditions under which they are kept.

Several years ago Dr. E. P. Henson delivered a lecture on the subject of "Fools" at the Lakeview Assembly Grounds, South Framingham. Bishop Vincent, who was presiding, introduced the speaker, saying: "We are about to listen to a lecture on fools by one of the greatest—here the Bishop paused, while the audience broke into an uproar of laughter, and then continued—the greatest lecturers of modern times." Dr. Henson, nowise nonplussed, rose and said: "Ladies and gentlemen, I am not as great a fool as our Bishop Vincent—here a pause and more laughter from the audience, and then the Doctor continued—would have you believe."

The good horse is the one buyers want. Of these there is a scarcity. The common nag is a drug. What the country ought to devote its attention to is the production of good express and draft horses. They sell better than any other kind.

The medium driver is not a ready seller, and the common driver is a drug on the market. Unfortunately, these are the kinds available in profusion. The country should change its policy in breeding horses, and the sooner the change is effected the better. Good horses will pay well for raising, and this country will afford a market for them at good prices for many years to come, to say nothing of the export trade, which takes a great many.

An Englishman, an Irishman and a Scotsman walking along a country road on a summer's day talked of their favorite flowers: "Give me the red rose of Old England," said the Englishman. "Give me the Shamrock of old Ireland," said the Irishman. "Na, na," said the Scotsman, "the flower of my country is best. Ye may sit on the rose and the shamrock, but ye'll no sit lang on the thistle!"

Time spent in trying to correct the unpleasant faults of others might better be used in some other way.

A Chicago man, while in New York, was requested by a long-distance telephone operator to deposit 25 cents for telephoning to a certain place. He objected.

"Why, in Chicago," he said, "we can telephone to h— for a quarter."

"Yes, but that's in your city limits," was the girl's answer.

It is very important to teach the young calf to eat at as early an age as possible, for the calf which eats well suffers much less at weaning time than one which is not accustomed to depend upon itself to any extent. Oats, either whole or ground, or a mixture of oats and oil cake, make an excellent food for the young calf at this time. It should also be encouraged to eat some clover hay and a few roots.

A wholesome dissatisfaction with present attainments is always and at all times a condition precedent to advancement and improvement. The man who thinks he is doing about as well as the average of his neighbors, and is therefore content, is not the stuff that progressive dairymen, farmers, merchants, manufacturers, or other successful men are made of.

Always mention the Southern Planter when writing advertisers.

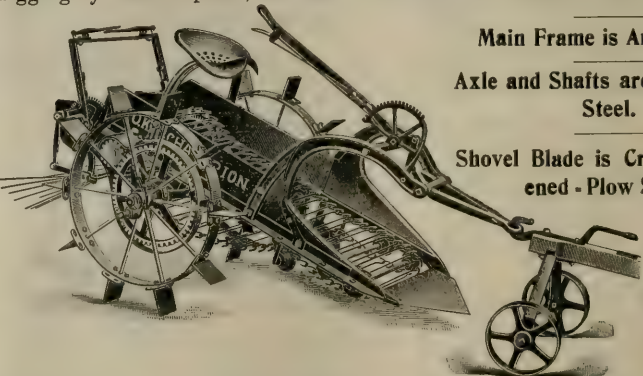
O. K. Champion Peanut Digger

Revolutionizes the method of Harvesting Peanuts; absolutely abolishes the slow and expensive methods of digging by hand or plow; will save one-half of the cost of labor and will get all the nuts in half time.

Vine Cutting Attaches
ment.

Built on Scientific
Principles.

Separates dirt from
nuts and vines, using
minimum
power.



Main Frame is Angle Steel.

Axle and Shafts are Cold-rolled
Steel.

Shovel Blade is Crucible Hard-
ened - Plow Steel.

Chain-belt
of high carbon
crucible
spring steel.

This machine is simplicity itself; the 20-inch wide scoop deposits dirt, nuts and vines on the elevator and separator and the thorough vibration completes the separation; the vines pass on to a shaker-fork which cleans the remaining dirt and properly wind-rows them.

The machine can be equipped with a rolling coulter for digging Sweet and Irish Potatoes. Send for illustrated descriptive circular and prices.

C. M. HARNISH, General Agent, No. 2720 East Marshall St., Richmond, Va.

THOMAS BASIC SLAG

SOME ENGLISH EXPERIMENTS

ON GRASS

Results obtained by W. Joseph Williams, Esq., on light sandy soil:

Without Basic Slag, 1820 lbs. Hay. With 672 lbs. Slag, 6271 lbs. Hay.

Damp, heavy clay soil: INCREASE, 2223 lbs.

Kainit and Nitrate, 3582 lbs. Hay. Addition of 784 lbs. Slag, 5712 lbs. Hay.

Light Soil: INCREASE, 2130 lbs. Hay.

Kainit and Nitrate, 2668 lbs. Hay. Addition of 784 lbs. Slag, 5812 lbs. Hay.

INCREASE, 3156 lbs. Hay.

Mr. S. Goodwin Preese had a very poor pasture on a hill, which 8 years prior was not worth \$1.25 per acre for grazing. He writes: "I dressed it with 896 lbs. of Basic Slag, and later on gave it another application of 560 lbs. I now consider it worth ten times as much per acre for grazing."

ON WHEAT

Results obtained in 1903 on heavy loam:

672 lbs. Basic Slag,	}	Grain.	Straw.
560 lbs. Kainit,		2344 lbs.	5704 lbs.
112 lbs. Nitrate of Soda,	}		
No Basic Slag,		1264 lbs.	2944 lbs.
560 lbs. Kainit,	}		
112 lbs. Nitrate of Soda,			
INCREASE in Grain, 1080 lbs.; in straw, 2760 lbs.			

ON OATS

784 lbs. Basic Slag,	}	Grain.	Straw.
672 lbs. Kainit,		1640 lbs.	4320 lbs.
112 lbs. Nitrate of Soda,	}		
No Basic Slag,		340 lbs.	800 lbs.
672 lbs. Kainit,	}		
112 lbs. Nitrate of Soda,			
INCREASE in Grain, 1300 lbs.; in straw, 3520 lbs.			

SOME GERMAN EXPERIMENTS IN FRUIT GROWING

PEARS

In the spring of 1899 trees were both small. After manuring 3 years the growth of the manured trees was fully double that of the unmanured, and in 1902 the fruitage was: Unmanured, $1\frac{1}{2}$ lbs.; manured, 48 lbs.

APPLES

Same treatment as the Pears during same time, results similar as to growth. Unmanured, $2\frac{3}{4}$ lbs. fruit; manured, 11 lbs. Annual manuring on *bearing trees* gives annual average crops of Superior Fruit. (No off years.) It takes 14 lbs. per tree of the above size, costing on cars, Richmond, $17\frac{1}{2}$ cents. To ascertain the quantity for larger trees, take the diameter of the crown of the tree. Say it is 8 yards; as the roots are supposed to cover one yard each side, making 10 yards, multiply one-half by itself, $5 \times 5 = 25$. Multiply the product, 25×3 gives 75 yards to be fertilized, requiring about 35 lbs., costing about 39 to 40 cents. A crop every year will pay many times the cost and labor. Think of it.

Experiments with Plums and Cherries show about the same increase. The difference, however, is that it is best not to disturb the roots of either of them, but simply to put the fertilizer on the land as it is.

We will take pleasure in quoting prices on any quantity, large or small. Can name price delivered at most stations in Virginia, Carolinas, Georgia, Alabama, and Tennessee.

A. S. LEE & SONS CO., (Inc.,) 108 S. 13th St., Richmond, Va.

An Arab method of ascertaining the value of a horse by his proportions is to measure him with the hand from the extremity of the dock to the middle of the withers, and take note of the number of palms. Then they begin again from the middle of the withers to the extremity of the upper lip, passing between the ears. If, in the two cases, the number of palms is equal, the horse will be good; but of ordinary speed. If the number of palms behind is greater than in front, the horse will have no "go" in him; but if the number of palms between the withers and the extremity of the upper lip is more considerable than in measuring from the tail to the withers, rest assured the horse will have great qualities.

On a recent visit to Alexandria, Va., the late General Fitzhugh Lee was approached by an old darkey, who respectfully introduced himself as a Confederate veteran. To test the accuracy of the old fellow's statement, General Lee put to him several searching questions, all of which the negro answered promptly and truthfully. Then the General asked his new friend where he had seen his best time in the old days.

"At Chickamauga, sah," glibly replied the darkey, "cause I run jest as soon as de firin' begin."

"But in such a hot battle as Chickamauga," asked the General, "how did you know which way to run?"

"Oh, Gin'ral," answered the old man, "dat's easy to tell. I runs to de safest place, o' co'se; de place where de gen'ral's was."

Robert Clarke, the artist, tells this story:

One day, while out walking with a friend of his, this friend complained of a toothache, and asked Mr. Clarke what he could advise him to buy, as they were in front of a drugstore.

"Why," said Mr. Clarke, "the last time I had a toothache I went home and my wife kissed it away for me." After a moment's pause his friend said: "Is your wife at home now?"

A professor of natural history, who was delivering a lecture to his class on the rhinoceros, noticed that the attention of the students was wandering. "Gentlemen," he said, sternly, "if you expect to realize the remarkably hideous nature of this beast you must keep your eyes fixed on me."

"You cannot keep me down," shouted the great orator at a public meeting; "though I may be pressed below the waves I rise again; you will find that I come to the surface, gentlemen."

"Yes," said an old whaler in the audience, "you come to the surface to blow."

Splendid Farms in Northern Virginia. Near the great Markets.

No. 1. Fine fruit farm; 100 acres, in the corporation of Fairfax. Has 1,000 peach trees, 4,000 of the very best grape vines, and all other kinds of fruit and berries. 9 room frame house, large frame barn and all out-buildings and well. Stream through farm. Just one mile from electric cars. The trees are all in full bearing, and the fruit will pay for the place in a short time. This is a bargain. Price, \$6,500 cash.

No. 4. 100 acres, one of the finest farms in Virginia. In the very best of cultivation; fine, large 12 room house, large halls and cellar, water in the kitchen, beautiful lawn surrounded by hedge, all kinds of fruit and berries; very large barn and all out-buildings; first class fence all around the farm, divided in fields for pasture, meadow, etc.; stream through the farm; near the town of Vienna. Price, \$11,000; part cash, balance to suit. Would take city property in part pay.

No. 6. Fine dairy farm, 100 acres, all clear and in high state of cultivation; three-fourths of a mile from Vienna; steam and electric cars, stores, churches, mill and school; 12 room house, 2 large barns and all necessary out-buildings; all kinds of fruit and berries. Price, \$8,000; terms to suit.

No. 7. Good dairy farm of 102 acres, in cultivation and grass; all kinds of fruit and berries; 2 room house, frame house, basement, barn 32x50; well fenced; all necessary out-buildings; one and one-fourth miles from railroad station, school and mill; all kinds of fruit. Price, \$3,000; \$1,000 cash, balance to suit.

No. 8. Nice home and farm of 60 acres; 40 acres clear and in high state of cultivation; 5 room house, well fenced; all other necessary buildings; well of water at door, spring near by, and stream through place; all kinds of fruit; 2 miles from Fairfax, school, church, stores and electric cars. Price, \$7,500, on easy terms.

No. 11. 450 acres; 350 in cultivation, balance in fine timber; 9 room house, well at door, spring near by, stream through farm; 2 large barns; all other necessary buildings; also tenant house. This is a fine farm for dairy and stock, one and one-half miles from Clifton Station, on Southern Railroad; school, church and stores. Terms, \$30 per acre; one-third cash, balance to suit.

No. 12. 16 acres; 14 acres cleared, balance in oak timber, 2 room house, barn 14x16, and other out-buildings; spring near by; all kinds of fruit; near school, church and store; three and one-half miles from electric railroad. Price, \$100, on easy terms.

No. 13. 300 acres; 100 cleared, balance in oak timber; 3,000 peach trees and other kinds of fruit. 6 room house, barn 20x40, all other buildings necessary; one-half mile from railroad, school, store and church. Price, \$6,000; one-half cash, balance to suit.

No. 14. 20 acres; 14 acres cleared, balance in oak timber, 50 pear, 200 apple, and 100 apple trees; stream through place; near Fairfax; stores, church, school and electric railroad. This is a fine place for a henery or dairy. Price, \$100, on easy terms.

No. 15. 27 acres of fine land; suitable for subdivision, as it is so near the electric railroad. Has fine building sites in the Corporation of Fairfax. Near school, church and store. Price, \$2,700; one-third cash, balance to suit.

No. 16. 148 acres; 75 clear, balance in all kinds of timber; 3 room house, small barn, hen house, and meat house; is well watered. Good fences; all kinds of fruit; 3 miles from Fairfax and Clifton Stations. All out-buildings and chicken near by. Price, \$2,000; one-half cash, balance to suit.

No. 17. 125 acres; 65 clear and in good condition, balance in all kinds of timber; 7 room

house; good barn in every field; good fences; all kinds of the very best varieties of fruit; 3 miles from Fairfax and Clifton Stations; near school and church; mill adjoins farm. Price, \$2,500; \$1,000 cash, balance to suit.

No. 18. 120 acres; 12 acres clear, balance in all kinds of timber; 2 room house and stable; spring and running water; partly fenced; half mile from station, school, church and store. Price, \$11 per acre; one-half cash, balance to suit.

No. 21. Very cheap farm of 100 acres; 90 cleared and in cultivation, balance in timber; 7 room house, small barn and cow shed; water in every field; good fences; all kinds of fruit; 1 mile from church, school and store, 3 miles from railroad. Price, \$1,800; terms to suit.

No. 24. Timber tract, 21 acres; one-half mile from Oakton and electric railroad. Price, \$50 per acre, cash.

No. 18. 44 acres; 38 acres clear, balance in timber; good 9 room house, with cellar; barn 30x24; large shed, corn house, has horse and carriage house. Lasting water is every hole in ground; good fences; all necessary out-buildings; 300 fruit trees in full bearing. Place well fenced with wire; beautiful lawn, with abundance of shade trees and shrubbery. Price, \$4,000; \$1,000 cash, balance to suit purchaser.

No. 27. 9-1/2 acres of fine land under high state of cultivation; 7 room house, with water, bath and six guest rooms; kitchen with water, bath and six guest rooms; all necessary out-buildings; 300 fruit trees in full bearing. Place well fenced with wire; beautiful lawn, with abundance of shade trees and shrubbery. Price, \$4,000; \$1,000 cash, balance to suit purchaser.

No. 33. 150 acres; 75 cleared, balance in timber; 4 room house; all kinds of fruit; buildings; well watered; all kinds of other good fences; near school, church, store and post-office; 5 miles from railroad. This is a cheap place. Price, \$3,500; one-half cash, balance to suit.

No. 40. 37 acres; all cleared, the balance in pine; 5 room house; spring near, two streams through the place; partly fenced; 200 apple trees; one-half mile from school and church, two and one-half miles from railroad and store. Price, \$600. Terms: \$150 cash, the balance to suit.

No. 50. Over 200 acres; 100 cleared; large new house not finished; a noted fine spring; stream through the place; a mile from Leesville, on Warrenton pike; one and one-half miles from Centerville, school, church and store. Price, \$2,500. Terms to suit.

No. 55. 140 acres; 70 clear, the balance in oak timber; 5 room house, barn all kinds of fruit; spring water through the place; all kinds of fruit; 5 miles from railroad, and 3 miles from electric railroad; three-fourths mile from school, church and store. Price, \$2,000. Terms: one-third cash; the balance to suit.

No. 73. 147 acres. 25 clear, balance in timber; 10 miles from school, post-office, etc.; one-half mile from school. Price, \$1,100. Terms \$500 down, the balance to suit. This property is in a nice neighborhood. I think it is a great bargain.

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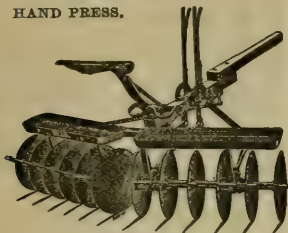
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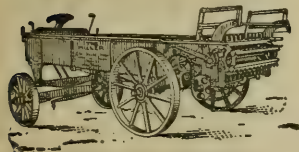
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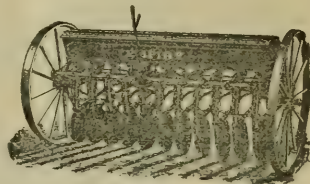


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66th Year.

Richmond, Va., October, 1905.

No. 10

Farm Management.

WORK FOR THE MONTH.

The month of August closed with a return of the showery weather which has been the characteristic of the summer, and this continued for a week into September, when we had a change to fine, warm weather, which continued up to the middle of the month, when a period of exceptionally cold weather set in for a few days. This has been followed by warm, showery weather up to this writing (20th September). Upon the whole the month of September was favorable for the maturing of the crops, but harvesting and saving them has been much interfered with, and there are yet large areas of forage crops and late crops of hay to be saved and much of the corn yet to be cut. The tobacco crop has greatly improved since our writing on the subject, for the September issue, and we hear now of the cutting of some fine crops of dark, heavy tobacco, and that the same is curing well. Peanuts are reported as being generally likely to be a light crop, as the season has been against them from the start.

The sweet potato crop is turning out better than at one time seemed likely, and large quantities are being shipped North and West, where in consequence of the damage to the Irish potato crop by the blight, which is very prevalent in nearly all the large Irish potato producing sections there is likely to be a good demand for them all the winter. This blight of the Irish potato crop is going to very largely reduce the yield of this crop, and will result in much of that dug being of poor keeping quality. In Aroostook county, Maine, which is the largest Irish potato producing section of the country, the crop is in a very bad condition. Last year this county alone shipped over 10,000,000 bushels of Irish

potatoes to the great markets of the country. This year it is not expected that more than 5,000,000 bushels can be shipped. The same conditions seem to prevail in other sections of the North and West. Here the late Irish potato crop seems to have generally done well, and we hear of large yields of good, sound potatoes. These should be carefully harvested and be stored where they can be kept from damage by frost, and they will be a valuable asset later in the season.

The picking of the cotton crop is proceeding slowly on account of the showery weather, and every indication now points to even a smaller crop than has been expected by the most conservative. It does not now seem likely that the crop will exceed 10,000,000 bales, at the outside, and more probably will not exceed 9,500,000 bales. Cotton is not likely, under these circumstances to go down in price, as the demand for the product is still very active, and English mills are working to their full capacity, and new ones being erected. In this country there still seems every probability of a continuance of trade activity, and good crops of wheat and corn will result in continued large buying by all classes.

The harvesting of the spring wheat crop in the Northwest has been much interfered with by rain, and this will, no doubt, materially reduce the yield of the crop. In some sections large areas have had to be abandoned, having been practically destroyed by the rains. We see no reason to change the opinion we gave in our last two issues that the total of yield of winter and spring wheat will be less than the Government reports would seem to indicate. However, this may be all the wheat produced will be needed at a good price, as the European

crops, except that of England, are short, and the export demand will be good.

The indications are that the corn crop will be a record one. In every section crops are reported good, except on some of the low-grounds, where the yield has been cut short by too much rain. In this State high land corn is, perhaps, a better crop than has ever before been grown. Wherever the land was well prepared before the crop was planted the corn has done well, even though it has not been so well cultivated as it might have been had the season been drier. Notwithstanding that the indications are for so good a crop of corn the price keeps firm, and we think is likely to do so as there is no great surplus in the cribs in the West. It has been fed liberally to stock and is still being so fed.

The showery weather we have had has been ideal for securing excellent stands of grass, clover, and alfalfa. Wherever our advice was followed and the land finely prepared and made rich, and the seed was put in in August without any grain crop, the stand of grass is splendid. One subscriber told us a few days ago that his grass seeded early in August was now almost like a meadow, covered all over with a rich, deep green sod, and that alfalfa seeded at the same time was six inches high and growing luxuriantly. There can be no question about the right time to sow grass, clover, and alfalfa seed in the South. It ought never to be seeded later than September, and better in August, and ought always to be sowed without any grain crop. Then, if the land has been finely prepared, has had some lime put on it and made rich with farmyard manure, or in its absence with bone meal and acid phosphate, a stand can almost certainly be secured. We would say to those who have secured a stand, do not injure it by turning stock of any kind on to it, until next fall; let the roots get deep hold of the land before letting stock graze it, and then it will bear grazing. If it can be given a top dressing of fine barn yard manure evenly spread over it during the winter, this will greatly help to prevent any of it being thrown out by frost, and will greatly increase the yield of the hay crop.

The principal work calling for attention during this month will be the seeding of the wheat crop. Winter oats ought to have been already sown, and it is very questionable whether if oats have not been sown, it is advisable now to sow them until February; at that time we would sow the Burt oat, instead of the Winter oat. This oat bids fair to be a great acquisition to the South. It matures quickly and thus usually escapes rust. We had a fine illustration of its growing qualities shown us this spring. Two pieces of land were sown with oats in February. The one was seeded with Winter oats and

the other with the Burt oat. In April the Burt oats were twice as tall as the Winter oats and had tillered much more and made, when harvested, much the greater yield. Land already plowed for the wheat crop should be kept constantly cultivated and rolled until we have weather cold enough to kill the fly and then be seeded. The poor yields of wheat which are made in the South, and indeed all over the country, for an average crop of fourteen bushels to the acre, which is the estimated average for this year for this country is a poor yield. In England the yield this year is thirty-five bushels to the acre and over thirty bushels to the acre is the average for a long series of years. Our small yield is more to be attributed to poor preparation of the land, rather than to any want of fertility in the soil or to absence of manure or fertilizer applied to the crop. The late Sir John Benett Lawes made a piece of land produce an average annual yield of thirteen bushels of wheat to the acre for over sixty years without the application of any manure or fertilizer of any kind during the whole period and without plowing down any crop of any kind, except the few weeds which grew upon the land. This he did solely by deep plowing and perfect preparation of the soil every year before seeding. He thus demonstrated the possibilities which lie in the land if only rendered available by deep plowing and perfect preparation. Given this and the use of leguminous crops as fallows, and lime to make the inert fertility available, and even without any manure or fertilizer a much better average yield than fourteen bushels to the acre can certainly be secured. We know land in this State which ten years ago would not make ten bushels of wheat to the acre, which now makes an average of over twenty-five bushels to the acre and this year made over thirty-five bushels to the acre, which has never had an ounce of fertilizer of any kind applied to it, but has been brought up solely by the use of leguminous crops, deep plowing, and perfect cultivation. Wherever wheat is to be sown on a pea fallow, instead of plowing it down now, we would cut it into the land with a disc harrow, and then finely prepare the land with the cultivator and harrow. To plow down a heavy green fallow this late, will make the land too puffy for the best success of wheat, even with the use of a roller to consolidate it. Where peas are plowed down this should be done in August, and then there is time for the peas to rot and for the land to be consolidated with the roller and harrow frequently used. Corn land intended to be seeded in wheat should have the corn cut off, and either taken off the land and set up elsewhere or the shocks be set up in rows as far apart as possible and the intermediate land prepared with the dice or cutaway harrow and roller and smoothing harrow. If the land was properly prepared for the corn crop by being deeply plowed and finely broken before the crop was planted, and frequently cultivated during the growth of the corn crop it will usually make a better wheat crop without

being plowed again. The shock rows can be seeded later, when the corn has cured and been gathered and the fodder removed. In our last issue we gave advice as to the fertilizer best to be used, and the variety of seed to be sown, and to this we refer our readers. Let the seed be well cleaned before being sown and blow out with the fan all small and shrivelled grain. Even if less seed be sown the yield will be a better sample and will mature more evenly and the crop will better withstand the freezes in the winter. Sow plenty of seed. Two bushels to the acre is little enough to sow on any but the richest land. We have sown three bushels to the acre many times with the greatest success. On rich land, well prepared, one and one-half bushels to the acre will usually make the best yield. When the seeding is furnished see to it that water furrows are opened through all low lying parts of the field so that the rainfall may be quickly carried off the land. Nothing is so prejudicial to the successful growth of the crop as water standing on the land. Wheat will never succeed with wet feet. If possible top dress the wheat with farmyard manure during the winter; especially on all thin land. This will greatly protect the crop from winter killing, and help it materially. Don't sow clover and grass seed with the wheat. Be content with growing one crop certainly, and don't risk the loss of the grass and clover seed. Thousands of bushels of clover and grass seed are thus wasted every year. The wheat being the stronger growing plant robs the grass and clover of the food and water they need to make a robust growth, and then when the wheat is cut off the hot sun kills them out, or at best leaves them in only such a low state of vitality that nothing can be got from the seedling until the following year. Wait until the wheat crop is harvested and then at once, if grass and clover is desired, plow and prepare the land finely for the seed; make rich, and then sow in August and the year following a heavy crop can be cut.

It is now getting too late for the seeding of crimson clover with certainty of success, but it may yet be seeded in mixture with wheat, oats and rye, to make a winter cover crop and pasture and for spring feed and to be turned down for improvement. The grain will protect the young plants during the winter and though some may be killed, yet even a partial stand will repay the outlay in seed and labor.

Hairy and English vetch should be sown in mixture with wheat or oats. This crop makes an excellent spring forage crop and good hay. It is ready for cutting for hay in May, and makes a highly nutritious feed for stock. The crop is also valuable as an improver of the land, conserving and gathering nitrogen, and makes a good fallow to turn down for a corn crop. The Hairy Vetch is, perhaps, more reliable to make a

success than the English Vetch, though we know many who grow both successfully, as we have done. The English Vetch may usually be sown later than the Hairy Vetch. We have known it to do well sown in November. About twenty or twenty-five pounds of Vetch seed should be sown to the acre, with three-quarters of a bushel of wheat or oats, or a mixture of the two. Vetch seed keeps high in price, as it is mostly imported. There is, however, no reason why this should be, as the seed matures well here having been successfully grown both in this State and in Maryland. It would be well to sow an acre for seed. For this purpose sow twenty pounds to the acre with half a bushel of wheat or oats to hold up the vetches and let the seed mature before cutting. The grain can be separated from the vetch seed with a grain fan and riddles. Wherever the wild vetch grows these two vetches will grow, but where no wild vetch (partridgepea) can be found, inoculated seed should be sown.

Cut down all corn crops at the ground and set up in shocks to cure. Do not make the shocks too large. Where the fodder is green and full of sap tie around the top with binder twine so that they may stand safely until fully cured. It is astonishing to see every year how many of our farmers yet pull fodder and cut tops and leave the greater part of the corn stalks in the fields to be wasted. This is a most wasteful practice in many respects, wasteful in labor, wasteful in corn, and wasteful in feed. Well cured corn fodder when shredded or finely cut is nearly as nutritious a feed as timothy hay, and experiments have shown that when fed in mixture with cow pea hay or clover hay it is much more nutritious than timothy hay fed alone. At the Missouri Experiment Station steers fed a mixture of corn fodder and clover hay made almost twice as much gain as those fed on timothy hay alone; each lot having the same quantity of shelled corn. The larger gains obtained from feeding the better balanced ration, made up of clover, cow peas or alfalfa and corn fodder, rather than a timothy hay ration, were also much more economical and profitable, and produced at decidedly less cost per ton, especially when the effect upon the fertility of the farm is considered. The conclusion arrived at after four years experiments was that a combination of corn fodder and clover hay, or cow pea hay is fully equal to timothy hay, whether fed without grain or with a small allowance of grain, whether on half feed or on full feed, and whether with yearlings or aged cattle. In other words, the farmer can by this means make the whole coarse fodder serve every purpose in cattle feeding at least, for which timothy hay is used. In the face of these facts thus established, it is marvellous that farmers will still go on wasting corn fodder by leaving the greater part, if not the whole of it, in the field. See to it that the practice is stopped and thus add to the stock

carrying capacity of the farm. If you have not barn room to store the fodder—it takes comparatively little room when shredded, to hold the fodder from a large area of land, and shredders are now coming into daily use, and will soon be as easily obtainable on the farm as the threshing machine—then when the shocks are thoroughly cured have them hauled up to the barn and stacked and covered with straw and they will keep until wanted.

Sorghum cane should be cut and set up in shocks and left in the field. It is almost impossible to cut this feed so that it will keep well stored in a barn. It, however, keeps well in the shocks, the stalks suck up sufficient moisture from the ground to keep them succulent and almost as sweet as sugar cane, whilst the fodder withstands the weather well and neither wastes nor spoils, except just on the outside. All kinds of stock are fond of it and cattle and hogs will spend hours chewing at the stalks and sucking out the sweet juice.

Have all barns and buildings repaired, cleaned and lime washed and ready for the stock, and as soon as nights become cold take them under cover. It is unprofitable to feed good rations merely to keep stock warm.

LIME AS AN IMPROVER OF LAND.

For many years we have been in season and out of season urging that Southern farmers should apply lime to their land instead of everlastingly dosing it with a few pounds of mixed commercial fertilizer to force from it a few extra bushels of corn or other crops. We have done this because we were satisfied from long experience in the use of lime as an improver of land that it would give better results than anything else except farm-yard manure, and would make that universal improver of land much more effective. For a long time our efforts to induce farmers to adopt our advice seemed almost fruitless, mainly probably caused by the fact that the lime merchants refused to make such a price for agricultural lime as would tempt its purchase. They wanted to sell lime to the farmers at the same price as to the builders and plasterers, and this price is too high, as a lower quality of lime can be used than is called for by the builder or plasterer, that is to say, one not so carefully burnt, so thoroughly freed from over-burnt or under burnt stone, suitable for agricultural use. They could well afford to sell this at a price which the farmer could afford to pay and thus make a market for a product which pays on their hands absolutely useless. At length some of the burners saw this and offered lime at a reasonable price, and within the past two or three years many farmers have given it a trial, and from these we have the most ample confirmation of our advice as to its value. In our opinion nearly every farmer in the South

could well afford to use lime on his land even though it cost him from \$4 to \$5 per ton, and he ought to be able to buy it at less than this cost, unless very far from the limestone fields or from the shell lime works. In a recent issue of the Country Gentleman we find the following article from a Virginia farmer on this subject, which so fully confirms our views and so emphatically illustrates the value of lime over commercial fertilizer, as an improver of land that we gladly reproduce it, and urge its attention on our readers. Lime, cow peas, crimson clover and the other legumes used together so as to sweeten the land and fill it with humus will redeem our wasted lands and make their cultivation profitable, and will make still richer and more productive our richest lands. This has been the experience in England, in Pennsylvania, and wherever tried. It will be so here. The following is the article referred to:

In this part of Virginia, within fifteen miles of Washington there is very little virgin soil—that is to say, land which is covered with the original forest and has never been under cultivation. Much of the timber land has been cut over until it is impossible to say whether the present second growth is on the original surface, or whether the land had been under cultivation and abandoned some 200 years ago. It is practically certain, however, that all the pine land has been cultivated under an exhaustive system, probably abandoned not over 100 years since where corn was cut 45 and 50 years ago.
wwhere corn was cut 45 and 50 years ago.

Probably, far more than half of the cultivated land in this section has been cleared the second time, and the judicious and economical management and improvement of this reclaimed land is a problem of the first importance to a majority of the residents, and especially to the newcomers in a very large part of the Southern country.

I am having some experience with land on which the pine had matured, probably at about 60 years or a little less, and had begun to blow over to such an extent that harvesting was the true forest policy. As we have a block of some 30 acres of young pine coming on, ranging now from 15 to 30 years of age, and as the old pine was on very level land, we are preparing to take about ten acres into cultivation. The first acre was grubbed of small bushes and burned over, and lay through one summer before plowing. The next season it was roughly plowed among the stumps, but not cropped. The third season many of the stumps were becoming loosened by the rotting of the roots, and we twisted them out with a team, pole and chain, and late in June planted corn, putting 200 pounds of dissolved South Carolina rock on the measured acre.

It was too late to make a good crop of corn under any conditions, but the smallness of the growth and the delicate color of the fodder were very discouraging, and the

yield was about ten bushels of poorly-filled nubbins. The ground was so light and free from weeds that persistent cultivation of the corn was not necessary, and in July we sowed cow peas in one-half of the corn and crimson clover in the other half, striving faithfully to find something to which new pine land was adapted.

The cow peas produced uniformly four leaves on each plant, attaining a height of about eight inches. Very few bloomed, and not one-fourth as much seed matured as was sown, but under this starveling, sickly growth the roots were covered with nodules, though the land was entirely surrounded by woods hundred of yards in extent, and was producing its first cultivated crop within full 50 years. This indicated incidentally that inoculation for cow peas was needless in this locality, and that a prolific growth of nodules did not necessarily insure a healthy top growth.

As to the crimson clover, it germinated, but turned yellow and died before winter, except on small spots where the largest brush piles had been burned. Here it bade fair to survive, and I think had developed nodules almost as freely as the cow peas when winter set in, but as we had little snow, the wild rabbits gnawed the plants down to the tap-root, and there remained not a normal plant to tell the tale the following spring.

About four square rods in one corner of the block we had covered with as much fresh manure as we could work in and had planted with potatoes at the same time as the corn. These had produced fairly well, and the corn in the adjacent row showed that there was one style of treatment which was effectual; but at the close of our first season of cropping, I was rather glad that I was working with one acre instead of the whole ten, upon part of which the timber was still standing. The sale of the timber was yielding about \$30 per acre, and it began to look as though it would cost more than this amount to make the land produce a crop worth handling. It really looked as though the cheapest way out of the difficulty was to let the land go back into pines, under which, at present prices, it would produce wood to the value of about a dollar per acre per year, ready to harvest in 30 or 40 years.

There remained to be tried the use of lime and complete fertilizers, neither of which are supposed to be necessary on new hardwood land. So in the spring of 1904 following our general failures just recorded, more stumps were taken out and the land pretty thoroughly plowed. The rabbits had eaten not only the clover but the little dead cow-pea vines, so there was nothing to turn under. We mixed a little muriate of potash with 100 pounds of rock phosphate and a cartload of good, fine manure, and applied in the hill with the corn, which was of the same variety planted before. This time, however, we got it in the last week in May—one month earlier than in the previous year. The manure gave out when two-thirds of the acre had been planted,

and the rest of the corn had only the chemical fertilizer in the hill. The remainder of a 200-pound sack of rock was sown broadcast over the piece. We then applied either six or eight hundred pounds of fresh-ground lime, spread carefully from the wagon by always throwing with the wind, and harrowed it in before the corn had germinated.

From the moment this corn appeared, it had a good color and gave promise of a fine crop. Although the lime was the only thing which had been uniformly applied to the whole acre, the corn from start to finish was one of the most uniform pieces I have ever grown. At no stage of growth could it be discovered where the manure in the hill ended and the mineral fertilizers began, or where cow peas or clover had been sown the previous year. After the corn showed tassel, a stranger would have been compelled to walk over the whole patch to determine which part had been heavily manured for potatoes the year before. Lime seemed to have blotted out all distinctions and produced a crop of uniform and above the average quantity over the whole.

In order to determine the extent of the effect of the lime we again sowed crimson clover in July, covering with a light harrow cultivator, and ceasing cultivation of the corn at the same time as in the year before. The clover made a good stand and showed the right color from the start. The fall was dry, but it branched and lay flat on the ground, and made almost a complete mat when our early snow came. The rabbits had all they wanted, but there was plenty left. The corn yield was 54 bushels of well-filled ears on small cobs. The fodder indicated more, but we planted an early variety the first year because of extreme lateness, and are using it on the same land still for the purpose of better comparison of yearly yields.

The lime was shipped to us in 200 pound sacks, and I am not certain whether three or four sacks were spread upon this acre, but am of impression that it was the smaller amount. The young man who spread it is now growing pines for the Government in the sand hills of Western Nebraska. The lime cost \$8.73 per ton delivered here, and this particular 600 pounds would have been cheap at five times the price.

After all, I feared that the new land had sung a swan song under the stimulus of the lime, and that heroic measures would be necessary to produce another crop of corn. I awaited the starting of that crimson clover this spring with much interest. The season was not favorable, and the early growth was slow; none of the patches sown near the barn for soiling made the usual growth, but by the middle of May we had a growth averaging about 15 inches in height and almost as uniform as the corn crop had been. The lime was still there. By carefully walking over the land, the locations of the larger brush piles could be detected by the denser growth of

clover, and the spot heavily manured two years before was barely discernable.

We have plowed under this growth of clover, and again planted the same variety of corn—in fact, seed from the same land, and on almost the same date as last year. We made the rows fully four feet apart, thinking we would improve the chance of a clover catch, for we purpose keeping up the rotation as long as it gives good results. We left the corn a little too thick in the row, however, and will have some stalks without ears, but the growth of this corn has been almost identical with that of last year, although that grew from lime and a little commercial fertilizer, and this is on green clover, with one broadcast application of 167 pounds of rock phosphate. Again, we have sown crimson clover and stopped cultivation rather early, and again we have a stand with fairly good color, though thus far it has had too much rain and is spindling. I am counting on as much shelled corn as last year, and apparently the end is not yet. One modest application of lime has made corn and clover grow where none grew before, and has given us the only successful catches of crimson clover under field corn which we have ever been able to secure.

It seemed reasonable to believe that acidity had been the chief trouble with this soil, since clover would not live except where brush or stumps had been burned, and sorrel was one of the first weeds of cultivation to appear. In fact, it preceded cultivation on the newly-cleared surface.

Anxious to discover the practical value of the litmus-paper test, I recently inserted several pieces in different parts of the acre under the growing corn and the second successful catch of crimson clover. The first piece was put in the highest and driest corner of the lot, where cobblestones abound in the light red clay. The second, three yards away, in a slight depression which this season has been very wet. This piece I put under a vigorous tuft of sorrel. The third was placed in the softest and most loamy part of the path, where the clover growth turned under had been the best, but away from the immediate site of brush piles. This piece I put among the decaying stems of the clover thrown up by the last working of the corn. The fourth piece was put in one corner heavily manured three seasons ago and since treated like the rest. A fifth piece is put a rod away among the stumps on the next acre which land is just where this was five years ago.

After about two hours, I gathered up my litmus scraps and found every piece turned red and with very slight degrees of variation. According to the litmus paper, the lime had not changed the original character of the soil at all! It was all alike to the litmus, whether it produced sorrel or clover. Neither the abundance of clover turned under, nor the absence of humus on the stony corner were any noticeable difference; the litmus said it was all sour alike! According to this test, I

have just as much need to apply lime where lime is now producing good clover and corn as to apply it to the newly-plowed stump land, where I am morally certain no clover will grow.

As a last resort, I put a piece of litmus paper in the soil over which I knew the largest pile of stumps and brush had been burned, probably two or three cords of wood of all kinds, and the ashes had been only slightly scattered. This paper I left over night, and after 24 hours found that it had faded to a very light bluish-white, but with no positive redness. So it seems possible by burning a layer of stumps five or six feet deep over this land to correct its acidity by the litmus test. But since 600 pounds of lime seems sufficient by the clover test, I am inclined to place the litmus test in that class of very correct scientific determinations which are so delicately perfect as to be practically useless.

It might be maintained that within the past three years we have applied nearly as many pounds of acid fertilizer to this acre of land as we have of lime. This might account for its continued acidity and for continued clover failures, but the clover has ceased to fail, while the land is still acid. In short, almost all our soils, including the most productive gardens and heavily-sodded meadows, will show an acid reaction by the delicate litmus-paper test, and those soils which do not produce good crops of clover can be sufficiently modified to do so without undergoing any change which the litmus-paper test will reveal. Therefore use litmus-paper as a matter of interest and curiosity, and as an indication of the general character of the soil, but do not invest any considerable amount of money on its showing, or think that liming has been ineffectual or insufficient because the litmus paper still indicates a perceptible degree of acidity.

Fairfax County, Va.

W. A. Sherman.

PECAN GROWING.

I wish you would let me know in your next issue what is the best way to bud pecans in a hickory stump, and will pecans grow in a walnut stump? Be glad if you will give me what information you can in your next issue in regard to budding trees.

J. L. CAMP.

Southampton Co., Va.

The pecan is a very difficult nut to work upon any stock and rarely succeeds at all on any other than a pecan stock. We would, therefore, advise you not to waste time in endeavoring to bud on hickory or walnut, but to sow pecan nuts, raise stocks from them, into which bud or graft the best varieties of pecans to be obtained from the growers of specialties in this line.

You would notice in our June issue an article on budding trees.—Ed.

In your correspondence with advertisers always mention the SOUTHERN PLANTER.

Inquirers' Column.

PREPARATION FOR ALFALFA.

I have a piece of land (4acres) on which I expect to sow alfalfa in the fall of 1907. There is Red, Japan and White clover (Melilotus) on the land now. I have covered it with stable and barnyard manure, and expect to plow it deep this fall and put on two tons of lime, and in the spring plant it to corn, with a small quantity of fertilizer, the corn to be sown with Crimson clover at last working (seed to be inoculated). Crimson clover to remain as a cover crop during the winter of 1906-1907. Plow the Crimson clover under in the spring of 1907, and sow to peas. Cut the peas for hay. Then prepare the land and put two more tons of lime and 400 lbs. of bone meal per acre. Then sow 20 lbs. inoculated alfalfa seed per acre. Which is best to sow, Crimson or Burr Clover? One man says bacteria from Burr clover helps to infect alfalfa.

2. Which is superior, bone meal or raw bone?

3. Do you think I will get alfalfa by the plan I have laid down?

YOUNG FARMER.

Spots Co., Va.

1. Burr clover carries a bacteria which will inoculate the alfalfa, whilst Crimson clover does not, and, therefore, Burr clover would be the best to sow, if there was a certainty that it would succeed. Hitherto, however, this clover has not been grown, except experimentally, so far north as your location, and hence it would be running a risk to rely upon it making a crop. We would suggest that you mix some Burr clover seed with the Crimson clover, and test its suitability for your location.

2. Bone meal and raw bone are practically the same thing. The meal is only more finely ground, and, therefore, more quickly available.

3. The preparation you suggest should result in a successful growth of alfalfa. We think, however, that you need not lime twice. The first liming will render the soil alkaline enough for the alfalfa. It would be better to sow 25 lbs. of seed per acre rather than 20.—Ed.

WOOD ASHES—PLANT FOR NAME.

1. Can you give me the commercial value of ashes (per ton) made from hard-wood scraps and saw-dust—viz., hickory and white oak—mostly oak scraps without the presence of any bark?

2. Is there any appreciable difference in the fertilizing value of ashes from hardwood, in the first case, and ashes from the whole timber, when bark and all is burned, in case of burning the slabs with bark on at saw-mill.

3. I can buy ashes from furniture mill near and use as fertilizer in top dressing on young clover or on wheat and oats, but wish you to first give me some figures as to its value as compared with commercial fertilizer.

4. I enclose a specimen of grass that I wish you to name and tell us if it has any value as a feed or as an improver of the soil. Its presence has been noted for the last two years, and is thought to have been introduced through glover seed.

I. H. FAUST.

Halifax Co., N. C.

1, 2, 3. There would be no appreciable difference in the value of ashes made from these different constituents. Hardwood ashes vary much in the composition. If they are unleached a fair sample will contain, on the average, about 5 per cent. of potash, 1.50 per cent. of phosphoric acid, and 34 per cent. of lime. The potash is the most valuable ingredient in them, and is worth about 4 cents per pound. The lime, of course, is worth something—say about \$2 per ton. We have no recent quotation of the price of Canada wood ashes, which are recognized as the best in quality. Last spring these were advertised at \$1.50 per 200 lbs. bag at Norfolk. Southern ashes, even of the best quality, would not be worth near this price.

4. The plant sent is a most pestiferous weed, called Plantago aristata (Bracted plantain). The only way to get rid of it is either to pull or dig it out or to put the land in hoed crops.—Ed.

COW PEAS FOR SEED.

I see from the August number that Mr. R. N. L., Washington Co., Va., is asking the best way to harvest cow peas for seed. Allow me to give him my experience last year. I planted with the corn-planter one bushel of cow peas in rows 3 feet apart. You stated in your editorial that it would be necessary to have men follow the mower to turn the cut vines out of the way of the horses. This is all right when you wish to cut them dry. I cut my peas in the morning when the dew is on them, and did not lose but a very few. From the bushel of peas, I gathered 25 bushels.

J. R. M. D.

Spots Co., Va.

GARDEN SAGE.

Please inform me if I can find sale for garden sage, and where; when to gather, and how to cure same. Also if leaves should be gathered now from plants grown from seed soon last April, now about two feet high.

Caroline Co., Va.

"READER."

We see sage on sale in the Richmond market frequently, and no doubt this is the case in all the large cities. The sage should be cut in the late summer or early fall months, and be tied in bunches and dried in the sun or over the stove, until thoroughly cured. Cut the stalks with the leaves on and dry altogether, and then the leaves can be rubbed from the stalks when dried. They cure better in this way than when the leaves are picked, as they do not pack together so closely.—Ed.

NAME OF PLANT REQUIRED—BRIARS—WORKING LAND.

1. I have about 2 acres in corn, and after the fodder was pulled I noticed plants with green, bushy tops dotting the field here and there. The plants resemble corn, except larger and taller and without shoot or tassel. The stalk is round, and joints very close together. The fodder has been gathered over three weeks and the top is still green. Corn was followed af-

ter peanuts. Please give this plant a name.

2. The Briar Troubles. The field referred to has been in cultivation for years and a portion of it produces this little green briar, and it is very troublesome in cultivating.

3. I have one acre that I sowed in oats and red clover last spring; used 800 pounds of guano. Got a nice lot of oats. Clover came up nicely, but died down. Please let me know the cause. This same lot was allowed to rest after the oats and now stands thick in weeds about 5 feet tall. Can I handle this with a winter crop, or would it be better to plow under the weeds, lime, and let it stand until spring?
R. M. GATLING.
Gates Co., N. C.

1. Send a specimen of the plant referred to. We never venture to name plants which we have not seen.

2. The only way to get rid of briars is to grub them out of the land. They can not be effectually gotten rid of with the plow and cultivator, as some parts of the roots are always left in the land and these start to grow again at once.

3. There is yet time to plow the weeds down. Lime the land and seed with rye and vetches. If land cannot be gotten ready to seed before November, we would then seed only rye, two bushels to the acre.—Ed.

VARIETY OF WHEAT TO SOW—RED CLOVER.

Will you please tell me what is the best variety of bearded wheat for a light gray soil? When is the best time to sow red clover on the wheat, in fall or spring?

L. L. HUNTER.

Hanover Co., Va.

Bearded Fulcaster will probably succeed as well as any other. We do not advise seeding clover or grass with a grain crop in the South. Whilst it sometimes succeeds, yet the practice causes the loss of thousands of bushels of clover seed every year. The young clover is killed out by the hot sun after the wheat is cut off. Sow the wheat alone and then after it is harvested, prepare the land for clover and sow in August.—Ed.

ALFALFA GROWING.

I commenced experimenting with alfalfa about 5 or 6 years ago and continued it until now. Have never attained to any success until last August. About the last of the third week of the month I seeded about $2\frac{1}{4}$ acres with seed treated with culture obtained from the Agricultural Department at Washington. This seeding came up nicely, as there was sufficient moisture in the ground to germinate the seed; but owing to a cool, windy spell which extended away up into the fall, much of it perished, and when the fall rains came, they favored me with a very uneven stand, although it was thick enough in places. When spring opened, and as soon as this ground was sufficiently dry to work on the surface, I put a heavy folding smoothing harrow on the ground and ordered it up nicely and then seeded with disc drill, setting the drift so as to cut the ground up a good deal more. The seed came up quite thick. I have cut this over twice this year. The first cutting was left on the land and the next was so heavy

it lodged badly on much of the land, where the fall seeding stood, and I of course took this off. Now this alfalfa came right up again and had a lovely green color, and a vigorous growth, and I began to tell my neighbors that I had succeeded in growing alfalfa, and indeed much of the crop saved for hay, did attain about 3 feet in height; but when the third cutting attained 8 or 10 inches in height, it was attacked by a blight and all the leaves turned first a light gray color and then yellow, and then much of it died back to the ground and the leaves fell off of it, and I noticed now that much of the stems that lost their leaves are again being clothed with nice green foliage and where the plants died back to the ground and are not dead, they are again springing up and usually are a nice rich green color. Now this land is high and dry and was well fertilized when seeded in August, and was limed before the first cutting in the spring, and when the spring seeding tillers will be very well set. But what I wish to know is, if there is anything known to the agricultural fraternity which will arrest this blight? And if so, what it is and where it can be obtained.

I sowed other plots in my garden in May and (land was very fertile and well limed with lime worked into the soil before seeding) secured a fine stand and it seemed to me as rapid, vigorous and pretty a growth as any one could wish. (I think in six weeks after seeding these plants were 8 or 10 inches high.) But about the time it reached 10 or 12 inches in height, this same malady attacked it and killed it "root and branch," except in spots. Now this land was sprinkled with soil from a plot growing alfalfa for 5 or 6 years, and showing a quantity of nodules, and so was the larger one referred to, and when plants are prized up with crowbar, they show great quantities of nodules, and one can even see them in knots almost as large as the end of one's finger. The season here has been very wet, and violent rains quite numerous, and I think I can observe that the blight on the alfalfa shows less where rains are less frequent.

Now, Mr. Editor, please pardon me for so lengthy a letter, for I am on a subject of great interest to me, and I believe to every Eastern farmer, and am desperately in need of information and aid and having noticed your ability to serve just such as I am through your most valuable paper, I am encouraged to appeal to you and desired to place all the facts and conditions before you.

I have a fine grade of Angus steer, about $3\frac{1}{2}$ years old which I am told by local cattle dealer has lump-jaw. Please tell me if there is any cure for this disease and also if the flesh of such an animal is suitable for food, and the law regulation, sale of same, and whether it may be conveyed to other cattle in the same herd.

JAMES H. QUISENBERRY.

Lenoir Co., Va.

There is a fungoid disease which sometimes attacks alfalfa and destroys it, and we assume this is what happened to your crop. We have only had one report of its occurrence in this State, and this was on the farm of Dr. Stubbs in Gloucester County a year or two ago. As soon as he saw that the crop was affected with it, he had it cut and piled in lumps and allowed it to head well. Then he dried it out and burnt it, thus destroying all the spores and had no further trouble with the disease.

The disease is actinomyces. It is curable with iodide of potassium.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The completion of the harvesting, shipping and storing of the summer's crops should be hastened as much as possible, as though the month of October is usually a fine mild one, yet we rarely escape a sharp frost towards the middle of it and the frost-bitten products are rarely worth much for storing or shipping.

Dig or pull all root crops except rutabagas and turnips, which will yet make the larger part of their growth, as they become mature and have them brought under cover as dug, so that they may dry out, and thus be made fit for either shipping or storing. In our last issue we gave advice as to the storing of Irish and sweet potatoes for winter use and to this refer readers. Sugar beets and Mangold wurtzil beets should be pulled before frost has touched them, or they will not keep. Scrape off the soil from the roots and cut off all the fine rootlets and the end of the tap root and the leaves, without cutting into the crown of the root, and then store in piles or kilns and cover with straw and soil sufficient to keep out all frost. Carrots, parsnips and salsafy will keep left in the ground where they are growing if a light furrow be plowed over the tops before hard frost. It is well, however, to pull part of the crops and store in dry sand in the cellar for use when the ground is too hard frozen to pull or dig out those left in the ground.

All ripe lima, butter and navy beans should be gathered and stored away in the pods until thoroughly dry and then be shelled out and after being put in a close box or barrel, be given a dose of carbon bisulphide to destroy all weevils and grubs in them. Put the carbon bisulphide, which can be bought at the drug stores, in a saucer on the top of the beans and close up the box or barrel—tight. The drug will evaporate and the fumes sink down through beans and kill everything living in them. Leave so closed for 48 hours and then open and air well, and then store away in barrels or close bags. *Don't have any lights about when handling carbon bisulphide as it is very explosive.* Black eye and other peas intended for seed should be handled in the same way and then no loss from weevil will be incurred.

Onion sets should be planted out for the spring and early summer crops. The potato or multiplier onion

is the one to plant out. Set in rows wide enough apart to permit of cultivation with horse-power and plant the sets 6 inches apart in the row, just deep enough to cover about half of the sets. The rows should be on a slight ridge made by throwing two furrows together over the manure or fertilizer, and this ridge should be flattened down somewhat with a plank drag or a light roller. Make the land fine and rich. A fertilizer made up of 200 lbs. of nitrate of soda, 750 pounds of cottonseed-meal, 750 pounds of 12 per cent. acid phosphate, and 300 pounds of muriate of potash to make a ton is a suitable one to use where plenty of barn-yard manure is unavoidable. Apply the fertilizer at the rate of from 500 to 1,000 pounds to the acre. The Queen or Pearl onion sets may also be planted out this month to make early summer onions. This onion keeps better than the Potato onion, but is not so certain to stand the winter rains, nor is it so early to mature.

Towards the end of the month cabbage plants should be set out for the spring crops. The land should be well and deeply prepared for this crop and be made rich as the cabbage is a gross feeder. Run the rows east and west and put the fertilizer in the furrow on the south side of the row and throw a light furrow onto it and on this set the plants. This gives them the protection of the furrows thrown up on the north side of the row, from the cold north winds. Pull the plants from seed-bed and drop into a bucket of water and set from this with as little delay as possible, thus preventing wilting of the plants. Make the rows 2 feet, 6 inches apart and set the plants 15 inches apart in the rows. A good fertilizer for the crops where farm-yard manure is not in sufficient abundance, to give a heavy dressing, may be made by mixing 300 lbs. nitrate of soda, 750 lbs. cottonseed-meal, 750 lbs. of acid phosphate, and 200 lbs. of muriate of potash, to make a ton. Apply at the rate of from 500 to 1,000 lbs. to the acre.

Kale and Spinach should be sown for winter and spring cutting. Sow in rows 2 feet 6 inches apart.

Draw some soil up to the celery plants to keep them from spreading out, but do not get earth up to the plants to bleach them, as they will yet make most of their growth. At the end of the month, or early in November, bunk the soil closely around the plants up nearly to the top of the stalks to bleach them. In

doing this be careful to keep the soil out of the hearts of the plants by holding the stalks together as the earth is pressed closely to them. They may be kept compact for earthing by running a soft cord around them, which can be removed after the earthing is done.

Strawberry plants may be set out this month. A piece of land which has grown Irish potatoes is ideal for growing strawberries, or they may be set out on land which has grown cowpeas or other cultivated crops. See our last issue for the advice on this crop.

SANITATION AS APPLIED TO PLANTS.

Editor Southern Planter:

People quite generally are beginning to see the necessity for sanitation as applied to themselves and to lower animals; yet how few realize that these same conditions are necessary for the successful growth of plants.

Disease, whether of plant or animal, is the result of a definite cause. There are three general causes of disease:

First, Impoverished or Improper Nourishment.—This manifests itself alike in the animal and plant kingdoms. The remedy is obvious when the specific cause is known.

Second, Insect Injury.—Diseases caused by insects are rare in man, but they become of great importance in the lower animals and of prime importance when dealing with plants. When treating insects attacking either kingdom, it is essential that the life history of the specific insect in question be known and that a remedy be applied consistent with the result of this knowledge.

Third, Bacterial and Fungous Injury.—To this group belong the bulk of all disease. The bacteria and fungi are two closely related groups of plants which are dependent upon animal or plant matter for their sustenance. When these forms grow upon living matter they produce disease.

The bacteria are more frequently met with and are more serious in the animal kingdom; however, some of the most serious plant diseases result from the growth of certain species of this group of plants. The fungi quite generally attack plants although a few live upon man and the lower animals.

The most effective treatment for this group of diseases is *sanitation* which means but little more than the destruction of all sources of infection.

The methods of bringing about good sanitary conditions differ somewhat according to the kingdom at-

tacked. In the animal kingdom one can treat the subject internally, externally, and also the surrounding premises. In the plant kingdom there is no known system of internal treatment, therefore plant pathologists have to confine their efforts to treating the plant externally and to disinfecting the surrounding premises. Because of this advantage, one can often *cure* a germ disease attacking an animal, whereas in the plant kingdom the best that can be hoped for in many cases is to *prevent* the disease or to hold it in *check* if it has already gained a foothold.

There are a few quacks who call themselves plant "doctors," and claim that they can tonic plants internally. Their treatment consists in boring an auger hole into the trunk of a tree and filling it with a "secret compound," using, usually, gunpowder, calomel, or other preparations. Such talk is nonsense. A plant takes up its food in a solution or in a gaseous state; it can not absorb solid bodies. Even if these holes were filled with a liquid preparation, the plant could not absorb enough to effect it, because the absorption could take place only through the cambium layer, and the part of this layer exposed in this case is a very narrow ring of cells around the hole. It is doubtful if any absorption takes place at all, because the natural tendency of a plant is to cover a wounded surface with a thin film in order to prevent evaporation from the surrounding cells.

Sanitary conditions, when applied to man and beast, are usually controlled in communities, and as a result, contagious or infectious diseases are confined to comparatively small localities. In respect to plants, one can control only his own premises, consequently, contagious plant diseases occur broadcast over the country. No matter how careful an individual is with his own plants, they are always open to infection from his less careful neighbors. This emphasizes the necessity for thorough and continual preventive treatment.

Often a fungus will attack a plant months before there is any visible indication of its presence, or in other words, a plant may show no its presence, or in other words a plant may show no symptoms of disease until after it is too late for effective treatment. A familiar example of this may be cited in the case of the well-known "smut" of wheat. The spores of this disease germinate and attack the wheat plant during its seedling stage, and yet there is no indication of the presence of any disease until the wheat plant itself forms its seed. The only way to treat such a disease is to prevent the infection of the wheat and this is accomplished by thorough disinfection of the wheat seed *before* planting.

The "rust" of wheat also brings out another phase of certain plant diseases. In this case the disease lives a part of the year on wheat and the other part on barberry. One unfamiliar with this fact would treat the wheat for the "rust" and the barberry would remain as a continual source of infection.

Improvement in a diseased plant is, at its best, slow, and this, combined with the other points mentioned, have led many to believe that diseases of plants are beyond human control. Such an idea is wrong. Plant diseases can be controlled, but it requires a careful, persistent, logical treatment to bring about such a result.

Those who are attempting to control the diseases of their plants will find it a great deal easier if they will observe certain recognized sanitary rules:

Of prime importance in this connection is the practice of an intelligent system of rotation of crops, taking care that the succeeding plants belong to different genera from those formerly occupying the same position. When a plant is grown in the same place for a number of years, the soil becomes impregnated with the spores of the diseases of that plant, consequently the diseases appear regularly, and usually with increasing virulence. As a result of the practice of rotation of crops, the spores of the diseases peculiar to a certain plant will die before that plant occupies the same position again.

Clean out your fence corners. All along fences seedling fruit trees spring up. These are usually valueless as sources of fruit, and they merely serve as good vehicles for every conceivable form of disease to which fruit is subject.

Destroy, by burning, all plants killed by disease. Such plants are covered with a mass of spores which are readily spread by natural agencies to neighboring plants causing their infection.

Burn all plants badly affected with any disease, and all plants affected with any incurable disease. After a disease reaches the stage that it can not be cured, destroy the host of the least value. There are diseases recognized as being incurable, for example, the peach "yellow." As soon as such a disease makes its appearance on a plant it should be destroyed.

In case of local disease remove and burn the affected part in order to prevent the attack from becoming general.

When a fungus requires two host plants for its growth as is the case with the "rust" of wheat, destroy the plant in order to prevent the further spread of the disease. The fungi cannot exist unless they can complete their life cycle upon the two plants.

Do not wait for the actual appearance of a disease, but spray for it *before* it appears. In this case bear in mind that "an ounce of prevention is worth a pound of cure."

Disinfect before planting the seed of grains subject to the "rust" and "smut." This is not much trouble, and if you neglect it, you can do nothing further to protect your crop.

Strive to promote healthy growth in plants by careful tillage, proper thinning, and other recognized cultural methods. Plants suffering from excessive or inadequate supply of food, water, heat or light are more susceptible to disease than if surrounded with the proper conditions for healthy growth.

Avoid planting especially susceptible varieties. Select those varieties most nearly free from disease thus gradually producing hardy strains of the best varieties.

W. A. P. MONCURE, *Mycologist.*

Virginia Experiment Station.

SHEEP AS A COMMERCIAL PROPOSITION.

Three years ago a Wisconsin man purchased on the Chicago market a band of eighty ewes at a cost of \$240. A few days since he disposed of them, not one having died meanwhile, for \$340. Although old and in his judgment past the age of breeding usefulness another farmer secured them with the object of founding a flock.

The Wisconsin man, while a good sheep handler, did not keep books, consequently his revenue from that small band of ewes can not be given with any degree of accuracy. During the three years they were on his farm, however, he sold lambs to the value of about \$500 annually, although to do this it was necessary to keep them until midwinter. This money he regarded as clear profit, charging up the value of the wool against the cost of maintaining the ewes and raising the lambs. In other words a band of eighty ewes paid a return of 200 per cent. annually on the original investment. These figures appear alluring and the fact must not be overlooked that a band of ewes of this size with their progeny are a constant care on the farm, this being one reason why the native crop is as meager as it is.—*Breeders Gazette.*

Enquiries should be sent to the office of THE SOUTHERN PLANTER, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

Mention Southern Planter in corresponding.

Live Stock and Dairy.

RAISING CALVES.

Editor Southern Planter:

The question of raising calves cheaply is one of general interest to stockmen. The dairyman is anxious to devise some means by which he can raise his calves without the use of whole milk because the butter fat or cream finds a ready sale at good prices, and therefore it is economy to raise the calf either on skim milk and adjuncts or some other substitute for milk. Those interested in raising calves for beef as a rule allow the calves to run with the dam, and in some respects this is an admirable practice, and in others very objectionable. Many conditions, of course, enter in to determine whether the practice is a profitable one or not. But it is doubtful with increasing land values, the demand for a more highly finished beef animal at a younger age and the steadily increasing price of all concentrated foodstuffs whether beef calves can be raised on the dam and leave the grower any profit in the near future. This is a question which would require considerable space for its proper discussion and it will therefore be passed over at this time, the idea being rather to show in the present paper what can be done in the way of raising and handling calves, intended either for the dairy or beef making on skim milk or skim milk and other adjuncts.

First of all it is important to have a strong, healthy calf and this desirable end can only be obtained provided the dam and sire are good individuals to commence with and properly nourished. The dam should be supplied with wholesome and nutritious food in order that the foetus may attain a desirable development. This is a point too frequently overlooked and accounts in a large measure for the undersized, weak, sickly and unthrifty calves observed from time to time. Succulent food is a desirable addition to the ration of the dam, as it tends to keep the bowels loose and the system free of effete material. The calf may be taken away from the dam at once or when from three to five days old. The sooner it is taken away if it is a strong and healthy individual, the better. It is not a difficult matter to teach the calf to drink by wetting the lips with milk, and later, if necessary, inserting the finger in the mouth. While various forms of nipples and artificial calf feeders are on the market, they are not as satisfactory as the old-fashioned method. They are also expensive and difficult to clean, and actual test has shown that calves raised with the nipple and without

show no difference in thrift or gain in live weight. Simplicity is, therefore, to be preferred and is a matter of economy as well. Little difficulty will be experienced in teaching calves to drink provided an attempt is not made to feed them too soon after removal from the dam.

It is apparent that some milk must be fed to the calf for several days after birth as the fat contained in the whole milk furnishes heat and energy and the delicate stomach of the young animal can not use substitutes for fat to advantage so early in life. The calf should be fed four pounds of milk about three times a day, giving the milk at blood temperature. At the end of ten days the calf should be so developed that feeding twice a day will be sufficient. At the end of two weeks the change to skim milk may be undertaken. Add about one or two pounds of skim milk per day until the change is finally effected. In the meantime teach the calf to eat some grain. Some ground oats or bran mixed with a little oil meal will provide satisfactory adjuncts. The calf can be readily taught to eat the grain by placing a little in the mouth immediately after feeding the milk. Not more than 12 pounds of milk should be fed to the calf until five to seven weeks of age. After that time from 14 to 16 pounds may be fed, and at the end of three months this may be increased to as much as 20 pounds. Those familiar with the composition of milk recognize that without the fat it contains all the elements needed for growth and muscular development. The fat in the whole milk, however, will make the calf a little slicker and smoother in appearance but that is about all, and most farmers will be surprised to know that skim milk is worth from 20 to 40 cents per 100 pounds, depending on the price of veal. It is therefore one of the best foods available on the farm for the economical raising of calves provided it is utilized to the best advantage. Unless danger of disease is suspected as in the case of tuberculosis, the sterilization or pasteurization of milk intended for calves does not seem to have any particular advantage. This is an important fact to bear in mind as it simplifies the matter of raising skim milk calves very much.

The next most important consideration is to find out what adjuncts may be safely fed to calves to be raised on skim milk. Experiments have been made in various parts of the country with this idea in mind, and it seems quite clear that after the calf has reached an age of several weeks that ground corn chop, shelled

corn, ground oats, bran, oil meal and dried blood may all be used to advantage. Dried blood, of course, should not be fed in large amounts, but in experiments made in Kansas, it was found to be a useful adjunct in the ration and quite effective in curing scours, one of the most troublesome diseases with which the calf-raiser has to contend. Corn seems to give about as good results when fed whole as when ground, and the concentrates, should, as a rule, be fed dry, so the calf will not bolt them down in a hurry before they are properly masticated. The digestion of starchy foods depends largely on the action of the saliva contained in the mouth, and therefore it is necessary that the grain be thoroughly masticated before swallowing; hence the advisability of feeding it dry and in a limited amount. It is a hard matter to say just what amount of grain should be fed per day, as that depends largely on the individual qualities of the calf. It should be gradually increased, however, from a handful up to two to three pounds at six months of age.

As soon as possible, providing grass is not available, some hay should be placed in racks where the calves can nibble at it. Clover or other leguminous hays are preferable, but mixed hay and Timothy will answer very well. The calves will seldom, if ever, eat too much roughness, though it is very important that it be kept before them in a fresh, attractive condition all the time because the ultimate development of the digestive organs depends largely on the consumption of considerable amounts of rough, coarse foods.

The daily gain that may be expected from calves fed as indicated will vary from $1\frac{3}{4}$ to 2 pounds; a fair average would probably be $1\frac{1}{2}$ pounds. From 700 to 1,000 pounds of skim milk will be required to make 100 pounds of gain, together with 100 pounds of grain, and 300 to 400 pounds of hay. In experiments made in Kansas it was found that a calf at five months of age fed on skim milk made a daily gain of 1.51 pounds per day at a cost of \$5.27; a calf fed on whole milk, 1.86 pounds of gain per day at a cost of \$19.13; and a calf running with the dam, 1.77 pounds of gain per day at a cost of \$12.00. The cost of 100 pounds of gain for the three methods of feeding was therefore \$2.26 for the skim milk lot, \$7.06 for the whole milk lot, and \$4.41 for the lot running with the dam. This is a remarkable difference and shows very clearly that any one interested in raising calves for beef or dairy purposes can certainly not afford to feed them whole milk. Observe that it will cost fully twice as much to raise a calf when running with the dam as when fed skim milk and adjuncts, and the chances are that the dam would be seriously injured if she were a good milker by the treatment.

It is hardly profitable to keep a cow that will not give more than twice as much milk as would be necessary for the growth of the calf until six months of age. According to these figures this would not be more than 2,000 pounds if suitable adjuncts were fed. A cow that will give from 4,000 to 6,000 pounds of milk will cost no more for keep than one that will not give more than 2,000, yet the 4,000 pounds of additional milk which should be obtained from a good cow should produce 160 pounds of butter fat, which, at 20 cents a pound, would be worth \$32.00. Many a cow that would give 6,000 pounds of milk is suckling a calf at a loss to the owner of from \$20.00 to \$30.00, considering that he can raise a skim milk calf of equal quality which will attain about the same weight at six months for, from \$5.00 to \$6.00. In view of the common practice it is not surprising that most farmers should say it is cheaper to buy a calf than to raise it, but under a different system of management this is a doubtful proposition, for a good calf at six months of age should bring \$20.00, and if the extra milk which the dam should give over and above what the calf would need were made into butter she should add at least \$30.00 more to the revenue of the farm than she does under present conditions.

Dairymen will be interested to know that it is possible to raise calves on hay tea made either from mixed grasses or from clovers. One of the troubles in feeding this kind of ration, however, is that it has a loosening effect on the bowels, and it is also necessary to feed considerable quantities of flaxseed jelly, say from $\frac{1}{2}$ to $\frac{3}{4}$ pounds per day, depending on the age and appetite of the calf. Calves fed on hay tea will not make anything like as rapid gains as those receiving skim milk, but in cases of necessity it can be resorted to with fair results.

For feeding adjuncts the grains already mentioned will prove as satisfactory to replace the fat in milk as any of the higher priced proprietary foodstuffs now on the market. In other words, the farmer can raise all the concentrates on his farm needed to produce a suitable ration for a skim milk or hay tea fed calf. In the light of recent investigations it appears that it is not necessary to go to the labor of making flaxseed jelly and various other gruels which it has been deemed advisable to add to skim milk in order to grow calves economically. Mixed grains fed dry in suitable amounts, will prove entirely satisfactory if the health of the animal is properly looked after. A little salt and water should be provided. A calf will drink from 10 to 12 pounds of water a day if given the opportunity.

Should scours appear, feed a spoonful of dried blood

in the milk, and in fact, a little blood from time to time has a good tonic effect on the system. Young calves should be dehorned, as a rule, with caustic potash, a preparation which is easily and quickly applied with good results. A low stanchion constructed on similar lines to those used for cows provides the best way of feeding calves. The pails containing the milk can then be set in the stanchions and the calves all fed at once, without the trouble and delay which follows feeding them separately in open lots.

ANDREW M. SOULE,
Dean and Director.

Virginia Experiment Station.

TEXAS FEVER TICKS.

Editor Southern Planter:

I notice the frequent articles as to cattle tick or "Texas Fever" and I more particularly notice the various answers given farmers as to tick eradication and "how easy" some of you say it is to get rid of the ticks.

Mr. Editor, do you reckon many of these "Tick Smart Alecks" ever saw a fever tick, or would he know one should he be so fortunate as to meet him in the road? You know I gave you my actual experience along the tick fever line now nearly two years ago. I can not help feeling sorry for the poor fellow or fellows who come to many of you Southern editors asking "What can I do for my cattle; they are dying from tick fever." And some I notice say, "unless I can get you to help me, I shall be compelled to quit the cattle business." Then I can but laugh when I see the advice given to this or these same worried people. Mr. Editor will say "I send you such and such bulletins giving full treatment as to ridding your land of fever tick, and it is so easy a task to get rid of them, etc." Let some of you people get a herd of cattle and try raising them among ticks, unless already immune against tick fever, and undertake to clear out the ticks, and he or they will then know how to sympathize with these tick-afflicted people.

I long since found out that free advice was no more appreciated than free anything else. So to keep from worrying your readers will say to them after a loss of about \$2,500 with "Friend Tick," I've named my stock farm "Eureka," and, Sir! "I have found it!" Now, I would not rid my pastures of ticks. I am one man who would not sell them so long as I continue to raise cattle. Two fine bulls, each pure-bred, one an Angus, the other one a Red Poll, and forty head of

grades and calves constitute our cattle belongings. Inoculation! Inoculation! Inoculation!

A. WILLIAMS.

Halifax County, N. C.

Because by inoculation, which we have often advised and strongly believe in, and which every cattle owner in the South ought to subject all his cattle to, we can almost wholly prevent loss by Texas fever; yet we do not agree with our correspondent that the fever ticks should be allowed to continue to infest our lands and imperil our herds, and the herds of all those they may come in contact with. Without the presence of the ticks we should have no Texas fever and no necessity to inoculate and our stock could be shipped into open markets of the North and West at all times. The vexatious quarantine restrictions and discrimination in price against our stock would cease with the extermination of the ticks. Inoculation will never cause these to be abandoned. Until the ticks are exterminated, the South will never become a great stock country. With their extermination the South will become the greatest stock section of the United States. They can be exterminated from Virginia and North Carolina and at a less cost than is suffered in each year by the stock keepers of those two States. To temporize with such an enemy to our progress and wealth is worse than folly. Inoculation is only a palliative. It makes it possible to keep pure-bred stock imported from the North and West to the South, but it will never make it possible for us to send our stock to the best markets at all times free from discrimination against us.—Ed.

MOLASSES FOR STOCK.

Will you please inform me if molasses is good for "milk cows," and if so, what kind, and how to use it?

W. H. McCRARY.

Pittsylvania Co., Va.

We have fed molasses to cows with satisfaction, and recently a number of experiments have been made with it in Louisiana with good results, both upon feeding and milking stock. Orleans molasses would be the best. We fed at the rate of about 2 or 3 pounds per day, melting the molasses in hot water and pouring it over the cut feed with which the grain ration was then mixed.—Ed.

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In writing to advertisers, mention PLANTER.

The Horse.

HORSE NOTES.

With the horse shows, fairs, and race meetings on this month, we are to have plenty of sport both in Virginia and North Carolina. The Virginia-Carolina Circuit of fairs and race meetings began at Roanoke and took place during the last week of September and following right after this comes Lynchburg. At the latter the dates of the Interstate Fair and Horse Show are the same and for the week of October 3rd-6th we are promised a real treat, as during the day the fair and races will be on, while from 8 P. M. until past midnight the horse show will be in full blast and on the tan bark ring of the big auditorium, Virginia's choicest equine products will contest for the prizes offered. The dates of the Winston-Salem fair are the same as those of Lynchburg and for the week following those at Radford, Va., and Greensboro, N. C., are scheduled. The North Carolina State Fair at Raleigh is fixed for October 16th-21st and the week following comes the Charlotte Fair, October 24th-27th, which closes the circuit.

As successful as was the Virginia Circuit of open air horse shows this season, which closed with Warrenton Show the last week in August, the trio of affairs to be held in the big amphitheatres during the present month of October in Lynchburg, Richmond, and Norfolk promise greater results.

The Lynchburg Show, which is limited to horses owned in Virginia, will come off on October 3d, 4th, 5th and 6th, while Richmond's big show is fixed for October 10th, 11th, 12th, 13th and 14th. The classes at Richmond, with the exception of a few for local horses, are open to the world, and seeing that the show here is associated with Chicago and the National Horse Show at New York, we are likely to witness the greatest affair of the sort ever seen in the South. Directly after Richmond comes Norfolk, the exact dates being October 17th, 18th, 19th and 20th, where 40 classes are offered, the prizes ranging from \$25 to \$200 each, which are sufficient to attract some of the greatest horses in the country.

Not only was "The Mecklenburg," at Chase City, Va., well patronized by natives of this State during the present season, but numbers came from a distance and for those from our sister State of North Carolina, this well-known Virginia health resort was a veritable mecca. In addition to L. Banks Holt, General Julian S. Carr, and other well-known breeders of the "Old North State," Dr. W. R. Capehart also joined the colony and enjoyed the elegant system of baths, like-

wise the chloride of calcium and lithia waters. Dr. Capehart is the owner of extensive fisheries and ancestral estates near Avoca, and for many years has figured as an owner and breeder of both thoroughbred and trotting horses. At different times the Capehart stud has included Arcturus and Steel Eyes, sons of the great Virginia bred race horse Planet; the trotters Tornado, a Morgan bred horse of impressive form, who left a marked impress on the stock; Alcarena, son of Alcantara, and Lavaigne, by Lancelot, 2:23.

Breeders and owners both of thoroughbreds and trotters who were guests at the "Mecklenburg" this season, found a congenial spirit in Dr. J. C. Walton, the resident physician, who has long been interested in good horses and having a lucrative practice, has been able to indulge his fancy to a greater or less extent. Dr. Walton is driving on the road Princess of Ridgefield, a fine-looking bay mare, by Prince Belmont, dam Ida Wise, by Bajardo, second dam Ida Wise, by Walker Morrill, the sire of Lamp Girl, 2:09, queen of Virginia-bred trotters. This mare is a trotter, as she worked a quarter in 35 seconds—a 2:20 gait—in her babyhood. At three years old she was bred to Lynne Bel, 2:10¼, and the produce was a bay filly. The latter, now two years old, is a rich bay in color, and with trotting action that indicates speed of a high order.

Among steeplechase winners at the recent Latonia meeting was the black horse, Mr. Rose, eight years old, by Ben Himyar, dam Tuberosa, who won over Jim Bozeman, Martin Brady and two others, in a handicap, over the short course, time, 3:00 1-5. Mr. Rose was bred in the Shiloh stud of Dr. L. L. Staton, Tarboro, N. C., who owned both his sire and dam. The latter Tuberosa, formerly known as Charcoal, was a back daughter of imp. Charaxus, dam Miss Grace, by Eolus, second dam Grace Darling, Diablo's dam, by Jonesboro, son of Lexington. She was bred in the Eilerslie stud, Charlottesville, Va.

Henry T. Oxnard, the sugar king, while on a recent visit in England, bought the thoroughbred stallion Islington, a full brother to the great English stallion Isinglass, and sire of Kinley Mack, the only horse that ever won both the Suburban and Brooklyn handicaps. On arrival in this country Islington will be taken to Mr. Oxnard's Virginia breeding establishment, The Blue Ridge Stud, near Rectortown, in Fauquier county. Ever since Islington was in this country and sired Kinley Mack, Mary Black, and the crack two-year-old Michael III., horsemen have been anxious for his return to America.

BROAD ROCK.

The Poultry Yard.

SEPTEMBER WORK WITH TURKEYS.

Fall Care of Old and Young Stock Under Different Conditions.

H. A. NOURSE.

September marks the beginning of fall work with turkeys. Young turkeys that reach the first of this month in good health are practically safe from everything except the depredations of thieves and four-footed prowlers; very few are lost from disease during the fall.

In parts of the country where much grain is grown, that which would otherwise be wasted in the field is consumed by the foraging flocks and turned into salable flesh. A flock so fortunate needs no additional food and the young will grow rapidly so long as the supply holds out. Sometimes the older turkeys obtain too much grain in such an environment and become overfat, a condition which predisposes them to disease, which, if not fatal, so reduces their vitality that they are unfit for breeding the following spring. It does not seem satisfactory to confine these mature specimens, for exercise is essential to their welfare, but they should not be allowed to obtain additional food and should at all times lead an open-air life. Young turkeys, those belonging to the season's hatch, are not likely to become overfat, or so fat as to be injured thereby, for in the harvest season they almost invariably roost on buildings or in trees, and take sufficient exercise during the day to enable their systems to properly digest all the food they consume.

VALUE OF OPEN-AIR LIFE.

One of the prime factors in success with turkeys is an outdoor life for old and young. In cold climates there are times during the winter when a shelter from high winds and storms is desirable, but from the time when the poults have finished putting on the first coat of feathers to the beginning of extreme cold weather, they should have no protection except that afforded by the branches of the trees.

Such a life is the one intended for them by nature, and any attempt to compel them to lead a more domestic existence usually results in impaired vitality and general deterioration.

In localities where little or no grain is grown, the food obtained in the fields by the turkeys is likely to consist of animal life, and uncultivated seeds and

berries. Old birds are safer in such places and young ones frequently do as well, though they may require more food from the farmer's granaries as the season advances and nature's supply diminishes.

There is no month so favorable to rapid growth and development as September. Given sufficient food of the right kind, nothing else is required to build frame and flesh. The fattening of those intended for the Thanksgiving market should not begin until October, and the September ration should include the elements required to produce flesh and muscle.

When the flock fails to find on the range the amount of nourishment required, the owner must furnish the balance or be satisfied with a smaller profit. Whole grains are best for the purpose and corn, wheat and oats, fed alternately, fulfill every requirement. Nothing that the farmer can raise will return so large a profit on the investment required as turkeys.—*Reliable Poultry Journal*.

TURKEY RAISING.

Editor Southern Planter:

I have read with great interest the article on Turkey Raising in the September *PLANTER* by W. K. Lawrence, Goochland county, Virginia.

I would very much like to know what she does with her turkey hens if she sets all her turkey eggs under chicken hens. My turkeys are very gentle and do not lay far from the house, and I have always understood that not allowing them to set made them so wild that it was almost impossible to find the nests and get the eggs. I have not been very fortunate in raising turkeys and will be very grateful for any information upon the subject.

L. A. SHARP.

Rockingham County, N. C.

THE PRICE OF EGGS FOR HATCHING.

Editor Southern Planter:

We note in the September number that your correspondent, under the head of "Poultry Notes," says: "No one can sell good reliable eggs for hatching for less than \$1 for 15, and very few are worth more to the average poultryman."

We, as well as others who are regular advertisers in your publication, feel that this does us an injustice, as we are offering eggs for hatching for

less than the price named by your correspondent. Your correspondent may have had long years experience in the poultry business, but we believe he goes too far when he makes this statement. If we did not believe we could sell our customers reliable eggs at the price we make, then we would discontinue shipping eggs.

We know of a case where two poultry dealers were offering eggs at the same figure, one made a success in the business, the other failed, and, as far as we could see, both of the businesses were conducted on the same plan. The fact of the matter was, that where the failure occurred was not a suitable place for chickens, which shows very plainly that some poultry dealers can sell reliable eggs cheaper than others.

Then, again, some do not want as much profit as others. We have sold eggs for \$1.50 per setting of 15 and lost money on them, not because our stock was better than than we have now, but because our feed was too expensive; in fact, some of the feed we were using was very costly and doing the birds harm instead of good. We have figured very carefully and find that it costs us 50 per cent more to feed Brahmas than the stock that we have, which is the S. C. B. Leghorns. Now, if this breed mentioned last can not be kept for reliable eggs at 75 cents per setting, the Brahma certainly will not give reliable eggs at \$1.00 per setting.

Your correspondent must bear in mind that where he can sell reliable eggs for \$1.00 per setting and make a profit, poultry dealers in a very cold country can not do so. We have on our file at present letters from people to whom we have sold eggs at 75 cents per 15 showing that they were satisfied, and that on the average 96 per cent of our eggs proved to be fertile.

MEHERRIN POULTRY FARM.

Southampton County, Va.

COW-PEA HAY FOR POULTRY.

I have an abundance of New Era Cow-Pea Hay and wish to feed some in most practical way to poultry. At first had intended using it as litter in scratching shed, but fear that would prove wasteful and stock might not relish what was left. I next thought of racks at back of scratching shed. What do you advise?

SUBSCRIBER.

Run the hay through a fodder cutter, cutting it into half-inch lengths. This cut fodder should then

be scalded and mixed with corn meal and bran into a dry, crumbly mash. The hens will then eat it clean up, wasting none.—Ed.

PIP IN CHICKENS.

Editor Southern Planter:

Some years ago two old colored women who live adjoining my place, said their chickens had the pip. I laughed at them, classing it with horn oil in cattle. Soon after one of them brought over to me half a dozen shells they had taken off the ends of the tongues of the fowls. This year my hens as well as half-grown chickens were dying from what some called limber neck, an entirely new disease with us. *The Farm Journal* said give them an asafetida pill, which we did, but it was no good. As soon as my colored neighbors saw them they pronounced it the pip. I examined the tongues and found a scab on them. This I removed with my thumb and finger nail, and applied vaseline to the raw place. We have lost no chickens since the adoption of this treatment. Pratt's Poultry Circular says it is caused by indigestion. Some German friends said in their country they attributed the disease to too much dry food.

E. E. MASON.

Fairfax County, Va.

Pip is usually regarded as a disease of the digestive organs, and not of a serious character, as it is neither infectious nor contagious, and not usually fatal. Your fowls must have been suffering from some other disease to cause them to die. Merely removing the hard scaly tip from the tongue could not have had such an effect as to mean the difference between life and death. Limber neck is an incurable disease caused by the eating of putrid animal matter.—Ed.

LIMESTONE ROCK.

Will you kindly advise me through the columns of your paper, if limestone rock that is lying on top of the ground will make as good lime as stone that is gotten from beneath the surface.

JAS. W. CUNNINGHAM.

West Virginia.

Yes. It is common in limestone sections to gather up the stones worked to the surface and then burn them and apply to the land.—Ed.

Miscellaneous.

TRAINING THE SCOTCH COLLIE.

Editor Southern Planter:

Among dogs none are more sensitive, quicker to take offense, easier to spoil, more susceptible of training than the Scotch Collie. In the famous Gentry dog show, the dogs that do their tricks with most enthusiasm and are most eager for the master's praise are Collies. The fine dog "Ellis," so well known to the little folks, for his swift running, mounting the horse at full speed, and riding like a Texas cowboy, and after it all forgetting the applause of the crowds and seeking his master for one look of praise or a friendly pat to tell him "well done," was a Collie. Mr. Gentry told me that no dog ever entered into the spirit of the performance like Ellis, none ever was as quickly train-

ing easy to train for Gentry, will make him very difficult for most of my readers. Yet he was a typical Collie and you must be just a bit like Gentry, if you ever train a Collie dog successfully. As I go about the country, I see so many fine Collies with intelligent eyes, affectionate dispositions and sensitive natures utterly spoiled and useless, that I desire to help some man make his dog a good one.

I sometimes think it will make a man better to train a Collie dog. Three qualities he must constantly cultivate, *patience, perseverance, gentleness*. If you lose your temper, give up, or get rough, you must stop training your dog.

Collies differ much in disposition and each dog must be studied. You can't treat all alike. They are much like children. You dare not punish some, while others demand it constantly. A few things you may consider as general rules in the training of all Collies:

- 1.—Never punish with a stick; always use your hand, either to pull ears, or slap.
- 2.—Never fail to pet a dog after punishment.
- 3.—Never ask a dog to do anything without compelling him to do it before you stop.
- 4.—Never speak in loud or harsh tones to your dog, when at work. Call him to you to scold him or punish him.
- 5.—Never throw at your dog. You must observe these rules in training all Collies.

Now, there are three rules at the foundation of all training. First, teach the dog to love you; second, make the dog obey you; third, always pet the dog when he does what you ask him.

These rules sound simple and easy, but after you try them, you will agree with me in saying few men are equal to the task.

How can you observe these rules? The first one is seemingly simple, for a dog naturally loves his master. Yes, but he won't own you as his master sometimes for months and then your punishment may cause him to bestow his affection on your wife, or some other member of the family. Secure a promise from every member of the family not to pet the dog or do anything to show sympathy for him while you have him in training. Every one must support you in your discipline.

You should begin feeding him while quite a puppy and pet him frequently. When two months old, teach him to follow you, and always use one whistle to bring him to you. Let him know that you like him and when he gets scared, pet him and try to show him



Bruce, a Great Cattle and Sheep Collie at Edgewood Farm, West Virginia.

ed, none so sensitive. He dared not use a harsh word in his presence. Like most Collies, he was ambitious to rule and asserted himself as "king of all." He was a tireless and unconquerable fighter, but the other dogs tired of his tyranny, sailed into him in a body one day, and literally tore him to pieces. So, little folks, you will never again see that agile, snow-white Collie flash about the ring doing his wonderful stunts. Poor Ellis! I will always think of him, when I take the children to see Gentry's dogs, and miss him.

Mr. Gentry might say that Ellis was easy to train, but there are few Gentrys. The very thing that made

you are his protector. He will soon love you, but in about two weeks you must start on your second lesson. As he comes to you, say "Come to me," as you whistle and call his name. He will learn his name, and the meaning of the order, in a few days. It seems so simple. He has the devil in him, as all puppies have, so some day, when you tell him to "Come to you," he will go romping off. Now is your time, and it is often a serious time. He must obey you: Go after him *persistently* and bring him to you, petting him each time. He is apt to be stubborn and insist on his way. Continue to bring him to you, as you call him, and if you see he is playing off, pull his ears a little to show him he must do what you say. This may make him mad. He may try to bite you. If so, slap him good and then pet him for a long time, waiting for his temper to cool. If he has much spirit, he will still resist. Now, you must study your dog. If pulling ears won't

At three months you can start teaching them tricks that will be useful. Teach them to "lie down," by pressing them down as you order it. Make them stay down till you signal them. It will take several weeks to teach a puppy to lie down in the field and stay till you come back. It can be done. Next, teach him to come to heel, by motioning, and saying, "to heel." Make him stay behind, till ordered forward. Next, teach him to stand by stopping him with a forked stick, as you order "hold." This is a very useful lesson. You may teach him to jump a stick, or fence. You should teach him to bark by ordering him to "speak," which may often be done by holding a bit of meat just out of reach. Next teach him to "go around" a chair by walking around with him and motioning. Then teach him "to left" or "to right," by motions.

When he knows all these things you can at six months try teaching him to drive, but you should let him go with you while with the stock, from the very beginning, trying to keep him from getting frightened by cows or sheep. If you intend to make a combination dog of him, try him on sheep first. Bring a bunch of lambs into a lane and place dog on one side, making him lie down till you are ready. Now, go to front of lambs and call to dog, "to drive." If he comes too fast, motion back with hand, calling, "steady," or "slow." You can walk backwards and motion him to right or left. Practice will soon teach him driving.

Next, take him into a field with sheep. Better into a small lot. Call the sheep, then say, "Go around," and you must go around with him. He will soon learn and once get him to go clear around and you can teach him by motions to direct them after you. It will take time and patience, but he will learn if he has it in him.

When you try cattle, be sure to keep him at the heels, by ordering him "behind." Go yourself to the heels and show him. Call him back from head, and force him to stay behind. Thus one by one the lessons can be given that will make your dog worth two men in handling stock and he will become indispensable on the farm.

We would feel like quitting the stock business, if it were not for our Collies.

Then you can teach them many amusing and useful things about the house. My dog will stand up, roll over, shut the door, open the gate, get my hat, and so forth. The Scotch Collie is the handsomest of dogs, is most faithful to his master and most intelligent. No man on a farm should be without such a faithful friend.

H. B. ARBUCKLE.

Maxwelton, W. Va.

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work, try shutting him up in a dark closet every time he refuses. If this won't work, try him with a chain, at first gently, and finally using force, pulling him over ground hard and swift, till he is terrified; every time he comes to you or you bring him to you, talk to him gentle and caress him. Let the chain be the last resort. I have taught more rebellious puppies to obey me through fear than in any other way, but you must strive to keep their affections, so constant petting is necessary. You must make them understand that they must obey and that it pleases you for them to obey. Once get this lesson instilled and the rest is easy. You will henceforth be the master.

THE MERITS OF THE EXPERIMENT STATION'S WORK.

Editor Southern Planter:

The increasing interest in Experiment Station work is shown by the liberal appropriations made in many States for their maintenance.

Probably most people are familiar with the fact that stations were originally organized under the Hatch Act, which provides that \$15,000 a year of Federal money shall be given to each State maintaining a station. This money is to be expended for original investigation relative to problems which confront the farmers of that immediate section, and not for the purpose of disseminating general information or promoting the individual interests of some individual or corporation who has an axe to grind. It is furthermore stated in the organic law of the stations, that the funds provided shall not be used, except in very limited amounts, for the erection of buildings or the purchase of land, it being expected that the equipment needed by the station and the funds for its future growth and development would be supplied by the States accepting the Federal fund.

The Virginia Station has had a long and honorable career, but up to the present time it has never received any direct support from the State; and this fact should be carefully noted. When it is considered that the Station is supposed to carry on investigations relative to practically every interest of the farmers of Virginia, it is not surprising that the sum of \$15,000 which it has hitherto received should prove totally inadequate for the tasks set before it. The Station is supposed to employ the most reliable and successful scientists in the field of general agriculture, animal husbandry, dairying, botany, biology, horticulture, entomology, veterinary science and field experiments. Clerical services must also be available in order that the thousands of letters annually received may be properly answered, and the bulletins giving the results of investigations, distributed. It is not surprising, therefore, in view of the expert services which the Station is supposed to have, that from \$8,000 to \$9,000 of its funds should annually be spent for salaries, while, even then, the men employed do not receive very liberal remuneration for their services. With \$2,000 spent for labor and \$1,000 for publications, and the necessary postage, freight and express, heat, light, power and water, chemical supplies, seeds, fertilizers, foodstuffs, etc., the \$15,000 is gone and very little, apparently left with which to accomplish work of

scientific value and conduct original investigations. A better understanding of these matters would probably result in something more than adverse criticism.

In view of the general interest that seems to have been awakened in the work of the Virginia Experiment Station, it seems appropriate that some statement with reference to the various lines of work in progress which have a definite bearing on the agricultural economics of the State, should be presented for the consideration of Virginia farmers; since this is the only institution in the State where original research is in progress for the benefit of agriculture. Although that is the interest in which by far the larger part of our people are engaged, and in which property is invested, it does not seem reasonable to suppose that if the farmers of the State are informed as to the value of the work now in progress and the benefits to be derived from what has been accomplished, that they would hesitate to demand that the Station receive adequate State support in the future.

The claim is frequently made that the work of the Experiment Station and the bulletins issued therefrom are beyond the understanding of the average farmer. This is not true as it implies a degree of ignorance and inability to conceive facts on the part of the farmer which is little short of slander. After years of work in farmers' institutes and other organizations by which the writer has been brought directly in contact with farmers, he has come to appreciate very clearly that they are anything but a stupid, ignorant lot of men; that they can grasp facts relative to their business clearly and quickly. Furthermore, it is evident that if the bulletins of the Station and the work in progress deal with known conditions they would not provide new and useful information for farmers.

The following statements set forth some of the more important facts in connection with the Station's work, which show its merit and that the results obtained are of immense value to all those who make their living from the soil. The statements are relative and not absolute, as it would be manifestly impossible to make them so. Only a few examples are given of the very many that constantly come to the attention of those in charge of the work.

Virginia has a large and growing interest in animal industries, and the economic maintenance of beef and dairy cattle is, therefore, a subject of great importance. In a recent feeding test with sixty head of beef cattle it was found that the 20 head

of cattle receiving silage gained 5,100 pounds in 180 days, or 1.46 pounds per head per day; the 20 receiving hay gained 3,900 pounds, or 1.10 pounds per head per day, and the 20 receiving stover gained 3,400 pounds, or .97 pounds per head per day. All these cattle received the same kind of meal, yet the difference was considerable, due to the effect of the roughness used. The silage fed cattle, for instance, gained 1,200 pounds more than the cattle fed hay, and 1,700 pounds more than the cattle fed stover. Of course, silage can not be fed for all purposes and under all circumstances, but thousands of silos could be built and profitably utilized in Virginia where there are now none.

Then, the financial side of the question is worth considering, for silage can be made at a cost of \$2 per ton, whereas, the timothy hay used in these experiments was valued on the farm at \$9, and the stover at \$5. Under the conditions outlined there are thousands of cattle that could be annually fed in Virginia on silage, made fat and of superior quality for slaughter, and the timothy hay now so generally fed, sold for \$10 to \$15 a ton. The cotton seed meal fed with the silage and corn would more than replace the fertility contained in the hay and the farmer would be ahead in every respect.

The twelfth census shows that 943,079 tons of hay were produced in the State at a value of \$7,690,082. Replacing the \$10 to \$15 a ton hay with \$2 silage and cotton seed meal would effect a saving of several million dollars annually to the farmers of Virginia. If the Station had done nothing else since its organization and conducted no further experiments, it would have paid for itself a thousand times over by this single demonstration.

In an experiment conducted with 34 dairy cows during the past winter, timothy hay was fed against corn stover as a roughness in conjunction with silage. The results indicate that the stover, while not quite equal to timothy hay, could be used fairly well to replace it in a ration for dairy cows. This is another fact of vast importance. In this trial it was further shown that concentrates are chiefly valuable for dairy cows in proportion to the digestible protein they contain. In other words, that cotton seed meal containing 37.2 per cent of digestible protein and costing about \$25 to \$27 a ton, was worth about three times as much as wheat bran containing 12 per cent of digestible protein and costing from \$23 to \$25 a ton. It has been a common practice in the past for farmers to use wheat bran in preference to cotton seed meal and other concen-

trated protein bearing foods, because they did not understand the basis on which the value of foods should be estimated.

The average yield of corn in Virginia is about 22 bushels per acre. If corn were planted in hills 39.6 inches apart each way, there would be 4,000 hills per acre. If two stalks were allowed to grow in each hill there would be 8,000 stalks per acre. If each stalk yields an ear it would mean that it only weighed 2.5 ounces. As a matter of fact, the ears of corn produced are much larger than this, but it is still evident that the stand is very imperfect, that the development of the ears is below a suitable standard. In other words, the selection and improvement of corn and other cereals is a subject which has been grievously neglected. If only a quarter of an ounce of grain were added to each of the 8,000 stalks indicated above, the yield of the corn in the State would be increased this year by $4\frac{1}{2}$ million bushels, with a value of \$2,225,000.

Numerous experiments are in progress on the Station farm with the object of securing improved strains of cereals, grasses, legumes, potatoes, etc. As these strains are developed and improved through selection and plant breeding, they will be distributed to a limited number of farmers for propagation in their section and redistributed to neighboring farmers who may be interested in their culture. By these methods, in the course of a few years, it is believed that a work of immense value will be accomplished, for it is clearly recognized that imperfect methods of cultivation and fertilization, and the use of unsatisfactory varieties is largely responsible for the small yields of corn and other cereals now obtained. This is but one example of many that might be given to show the value of the field investigations now in progress at the Station.

The Virginia Experiment Station has taken a very active part in the development of the horticultural interests of the State and to its efforts are due in a large measure the successful development of the apple industry. Valuable information has been disseminated concerning planting, pruning and spraying fruit trees and the control of insect pests. A detailed statement of the useful work done can not be given at this time, nor can the results flowing from it be correctly estimated. One example indicative of its value must be incorporated, before passing to another topic. Virginia has shipped 893,541 barrels of apples during the last five years. On the basis of \$2 per barrel, this fruit would represent \$1,500,000. One-half of this output would

have been worthless had not the depredations of the San Jose scale been effectually checked. The laws governing the control and eradication of this pest were enacted largely through the efforts of the Station officers, and practically all the information of value that has been disseminated in the State with reference to it, has come from the same source.

Bacteria are closely related to the various processes connected with plant growth and development. Recently artificial cultures for the inoculation of legumes have been placed on the market, \$1.50 to \$2.00 being asked for enough of the commercial product to inoculate an acre of land. The low cost of the material makes this price unreasonable, and, in order that the interests of the farmer might be fully protected, the Station has undertaken to prepare these cultures and distribute them at a cost of 25 cents per acre. Material will be sent out the present year for more than 3,000 acres of land, so that the saving effected in this direction alone amounts to \$5,250, or over one-third of the entire sum expended by the Station during the past fiscal year.

This department has also made some careful microscopical investigations of patent foods placed on the market. The average retail price of these foods is \$538.47, but their real value per ton is little above \$30. The basis of these foodstuffs was wheat bran, cotton seed meal, gluten meal, etc., to which was added a little salt, gentian, fenugreek, charcoal, etc. Their medical value was not worth considering, yet their purchase and use represents an immense drain on the resources of the farmer, for which he receives no adequate return. In pointing out the utter worthlessness of these goods, the Station has rendered a service to the farmers of the State worth hundreds of thousands of dollars.

The dairy department has not been idle. It has shown that by proper care and treatment cream can be shipped from Virginia to New Orleans, Palm Beach, Fla., and various other points from 1,000 to 1,200 miles distant. As milk and butter can be made at a reasonable price in Virginia this opens up a market for the sale of dairy products at profitable prices unavailable some years ago. The dairy department has also given advice and suggestions to any farmers engaged in the manufacture of butter and cheese and in the sale of milk and cream. It has shown them how to install apparatus that has enabled them to cheapen the cost of production very materially, and place their output on the market in first-class condition. There are farmers in Vir-

ginia who are making \$100 profit per cow, who were discouraged and ready to abandon the business until the dairy department of the Station came to their assistance. It is not possible to estimate the real value of the Station's work, but it has reached out and influenced men in almost every county in the State and enabled them to establish profitable industries where failure had previously attended their efforts.

A single example will show the value of the entomological work being done by the Experiment Station. Recently a shipment of 3,000 diseased trees was destroyed. Valuing the trees at 10 cents each, \$300 was thus saved to the planters, not to speak of the loss of the land and the disappointment and destruction of the orchard in the course of a few years from crown gall, the disease with which the trees were affected. The entomological department has also shown that the cost of producing the lime-sulphur wash for the San Jose scale should not exceed $1\frac{1}{4}$ cents per gallon, which would make 250 gallons cost about \$3.12, while the cost of Gon-sol, one of the patent remedies which has been extensively advertised, would be \$50. The saving effected on a single fruit farm would thus often amount to \$50. This applied to all the orchards of the State totals up a very large sum.

In mycology some very important work has been accomplished. A number of plant diseases have been very carefully studied, and methods devised for their eradication and control. Excellent work has been done on the canning of fruit and vegetables and the results published for the benefit of those interested in this line. Special studies have been made on the manufacture of ciders and vinegars of standard quality through the use of pure cultures of yeast, and it has been clearly shown that the thousands of bushels of undesirable apples which are often allowed to go to waste, can be utilized to advantage and at a large profit, for the manufacture of palatable cider through the cultures of these yeasts. The Station has sent out a number of these cultures at a very moderate cost and is now in a position to assist all those who may desire to experiment with them in the future. While no money value can be placed on these results, they are quite as far reaching in their influence as those obtained in many other departments.

The department of veterinary science has done good work from its inception. The amount of black-leg vaccine distributed totals up something like 15,000 doses. On the commercial value of 15 cents

per dose this department has saved \$2,250 to the farmers of the State, providing we ignore the thousands of animals which the use of the vaccine has saved. More than 500 important letters dealing with various diseases are answered by the department each year. These have at least a money value of \$1,000, while the free clinics and other work done without charge for the benefit of the farmers will annually total up \$1,000.

There is another feature of the Station's work which is worthy of special mention, and that is the correspondence through which information of immense value is given to farmers. During the present year at least 10,000 letters have been received and answered, and these replies have certainly been worth \$1.00 apiece. Some farmers have written and stated that the replies were worth hundreds of dollars to them. So that in this one item alone, at least \$10,000 per annum is saved. This represents two-thirds of the entire cost of the Station and entails an immense burden to the officers which is cheerfully borne when it is recognized that the information given is of such immense assistance to the farmers of the State.

During the past year between 30 and 40 farmers' institutes have been attended and addresses delivered before between 8,000 and 10,000 farmers. These addresses covered subjects of vital concern to stockmen and farmers and have done much to encourage and inspire those who have not had an opportunity previously to come in touch with scientific truths on which profitable agricultural practice must be based in the future. Already applications have been received for many institutes during the next fall and winter, showing that the effort put forth has been productive of much good and has resulted in the stimulation of an interest in modern agricultural practice which heretofore did not exist.

The Station also publishes bulletins from time to time. During the present year some six of these will be issued besides the annual report covering more than 200 pages, and representing original work. Some of the facts presented in these bulletins have already been touched on in the foregoing paragraphs and the results obtained have brought to light questions which merit serious consideration at the hands of thoughtful persons. Our bulletins are published in editions of 15,000, so that more than 100,000 pamphlets will be distributed during the course of the year.

Numerous articles have been contributed to the agricultural press, and a short press bulletin deal-

ing with some pertinent topic is sent out each month. In this way thousands of farmers are reached who do not receive the bulletins, though they are free for the asking, so that every possible means is utilized that the facts discovered by the Station may be disseminated and made available to farmers in every section of the State.

It is thus apparent that the Station is endeavoring to lead and guide the agricultural interests of the State as best it may with the limited funds at its disposal, and it is quite clear that every dollar expended is being accounted for with results of immense value. At the present time the Station is the only institution in the State whose sole aim and object is to investigate problems of direct concern to the farmers of the State. It is the only institution to which they can look for special instruction and guidance with reference to the many problems which confront them daily. The good the Station can accomplish is limited by the meagre support it is receiving at the present time. The results achieved speak for themselves and it must remain for the farmers of the State to say what the future policy of the Station shall be. Surely an institution that has accomplished work of such direct value to every farmer of the State and whose aims are so clearly defined should receive the unqualified support of all who are interested in the agricultural rejuvenation of Virginia.

ANDREW M. SOULE.

Virginia Experiment Station.

AN EXPERIMENT WITH ICE HOUSE ABOVE GROUND.

Editor Southern Planter:

My ice house, built above ground with dairy attached, has now been tested one summer. The results of my experience in building and managing this ice house and dairy will now be given so that others may be benefited by it.

Plenty of fresh, cool milk and butter on the farm are of very great importance. Good ice cream and lemonade are luxuries; all would like to have them. Where the farmer has a good, cool spring nearby, it will answer his purpose for all except the ice cream. He should be considered fortunate. Only a very small per cent of farmers have a good spring, hence the majority of them must resort to other means to keep their milk and butter cool. If one can build an ice house that will supply the family with ice all summer, and the drippings from the ice keep his milk and butter cool, the problem is

solved for him. My ice house is, in one sense, a complete success; in another it is not. It is built too small; the ice gave out the 15th of August. Up to that time my milk and butter kept well. After the water had cooled the milk it was allowed to constantly escape through a pipe into a trough outside the building where it "watered" my poultry. The building is 14 feet long, 10 feet wide and 8 feet high. Four feet is cut off at one end for a small dairy. The ice house is then ten feet square on the outside and eight feet high. It is double walled and a space between the two walls is 18 inches. This space is filled with saw dust. The floor consists of two layers of one-inch plank six inches above ground. The space between the floor and ground is filled also with saw dust. The sills under the building are all six inches square. There are two sets of sills and two sets of framing, really making two houses, one inside of the other. The floor slopes from two opposite sides of the building to a sill that runs through the center with a groove in it. This sill gradually slopes towards the dairy. The water collects in the groove of this sill and flows through an inch pipe with a loop in it into the dairy trough. This pipe goes through the double wall and connects with the center sill so that no water can escape around it. The pipe is bent in the middle so that water constantly stands in it and prevents air going through the pipe into the ice. The plank are all oak, saved eight inches wide and one inch thick. On the outside they are put on in weather-board "fashion." This building took twelve hundred feet of lumber and two thousand shingles. The total cost of such a building will depend, of course, upon the price of lumber and labor in each community. My building was constructed by ordinary farm labor.

The ice melted first next to the walls. The building stands out in the open exposed to the sun. If it were under the shade of trees the ice might keep better. A covering of two feet of straw was placed on top of the ice and if I had learned sooner that more straw was needed and also that it must be kept well tramped down against the ice as it melted, I could have held the ice much longer. When these precautions were taken the water dripped very slowly from the ice. I believe if a layer of straw were placed between the inside walls and the ice as the house is being filled the ice would keep better. It should be stated also that good ventilation is provided for between the roof and the ice to prevent warm air being confined over the ice. I am

convinced that such a building can be made to be a most useful thing on the farm. It remains to be seen how long such a building will last. If the timber were well seasoned and painted with some cheap paint or tar as the building is constructed, no doubt it would last much longer and well pay for the extra trouble.

R. H. PRICE.

It is a great help in preserving the ice to pack the space between the ice and the walls of the house with saw dust as the ice is being filled in and then to cover it with a foot of saw dust on the top before putting in any straw. The roof also should be made double like the walls.

Ed.

SHEEP PARASITES.

Taking up the parasite problem, there is no one thing so serious as this. There have indeed been times when the very existence of our flocks east of the Missouri river was threatened. There have been times when causes seemed obscure, beyond fathoming, and remedies seemed useless or worse. We are much more fortunate today, for our light of knowledge is much greater and our experience has shown us not only the causes but the remedies, and, better, the way to avoid the troubles almost altogether.

First we must learn to look at the flock as almost surely infected already with at least one or two species of parasites that may not yet be in sufficient numbers to do us much harm, but that will surely in time, if not checked in their natural increase, almost entirely destroy our lambs and damage our ewes. We must consider that wherever these sheep are dropping their dung it is seeding that land with germs, that these germs after a brief life in the soil will again reappear in the flock and especially in the lambs, and that they will work great mischief there and indeed incalculable damage.

This plainly bars the use of pastures of any sort from year to year without intervals of rest and absence of sheep. The longer sheep run upon this old grass the more it becomes infested and the more rapidly the sheep are in turn infested and the more rapidly they infest the soil and thus it is a danger increasing in geometrical proportion. But if there are intervals during which there are no sheep allowed upon these pastures the germs within them will die because of the absence of their hosts and the pastures will again be healthy and lambs may graze upon them in safety. The amount of time that is needed to free the land from these pests can not be definitely stated. I think, however, that a

round year, or better 16 months, will make the land safe and sound again.

Of these destructive parasites there are two that work the greatest harm to our flocks. One is the tiny thread-worm of the fourth stomach (*strongylus contortus*); the other the worm that causes the nodular disease. This last affects principally the older ewes, and is a genuine American parasite and probably affected deer or some other ruminants before it gained access to the sheep. The stomach-worm causes the most havoc among the lambs. The stomach-worm is the most dreadful of all parasites in its effects and in its spread and prevalence. And it is yet reaching out for new victims; it has crossed the Missouri and wherever there is succulent grass or thick sod in the pasture it will doubtless ever be a dreaded destroyer. The worst of it is that ewes that are infested will infest the soil on which they run and their lambs will become infested while yet sucking their mothers, even though there have been no sheep on the pasture for a century. That is, the germs of this parasite can live for months in the soil or can pass from the infested sheep to the soil and again re-enter the animal or the lamb within a very few days. It is this that gives it its terror. Then it is one of the very hardest of parasites to dislodge by ordinary medication. In truth, all medicines proved unavailing until we had the discovery of M. Julianne of France that benzine would destroy the worms and not harm the lamb, and our own later experiments have proved that gasoline is as good or better than benzine and we have learned to give it in much larger doses than Julianne dared give.

One of the blessings of this gasoline treatment is one may take time by the forelock and when there is danger of infection he may treat his entire flock and thus destroy all the germs that are in their incipency. We treated all of our lambs last summer three times with the result that but one case of serious infection developed and that one was entirely cured and made strong by a special treatment when the infection was first noticed. Our custom is to give one teaspoonful to a sucking lamb, two to a weaned lamb, three to a yearling and four to a mature ewe, always making an emulsion with milk. The sheep are fasted for 12 or 14 hours before being treated. Treatment is usually repeated three times at intervals of 24 hours in cases of undoubted infection, although when used as a preventive it is not necessary to repeat.

Supposing now that you have a pasture that you

consider free from parasites and wish to put ewes thereon with their lambs. I consider it entirely practicable completely to rid these ewes of their germs of stomach-worms before they are turned with their lambs to this pasture. If clean sheep are put on a clean pasture the result is a clean flock of lambs, a delight and a profit to the shepherd. Supposing, too, that there has been a lot of lambs dropped very early and that they are ready to wean about the time grass comes strong in May; it is a safe and sure thing to wean them and put them on this clean pasture without their mothers or any older sheep that might carry with them the germs of infection. There is this comforting thought, whatever the degree of infection in our flocks, the lambs are born clean and entirely free from infection of any sort. Nor is there danger of infection during winter. If the troughs are kept clean and especially if the lambs have creeps through which they go to eat at their own troughs, and if their mothers are tagged and thus the lamb's maternal fount is not soiled, infection is almost impossible, so that we start in spring with a clean lot of youngsters, and if we do not keep them clean it is our own fault.

If we have no clean fields, if every lot is infested, if in every pasture our flock has run the past year and in every field there have been sick lambs, we need not despair. There is the alternative of sowing crops on clean land or of soiling the flock within the barn or sheds. And this plan of keeping the lambs within the barn in summer and feeding them as though it was winter, only feeding them freshly cut forage, is a good one and not at all an expensive way to keep sheep. I am convinced that the most profitable results are obtained in this way. Our own experiments show it. There is absolutely no loss from disease, there is no loss from bloating, there is less waste of forage from being trampled down, the whole field is grazed alike, as the mowing machine is not discriminating as the fastidious sheep are, and, lastly and most important, you get a far greater weight of mutton from the acre than in the common method of grazing the crops. The objection of course is the cost of the labor and the dislike that we have for taking the trouble. We are as lazy as it is possible to be and if we can manage to make the sheep harvest their own crops with profit, that is the course that we will naturally follow.—*Joseph E. Wing, in Breeders' Gazette.*

In writing to advertisers, mention **PLANTER**.

FERTILIZING THE WHEAT CROP.

One of the farms belonging to the Ohio Experiment Station had been rented for many years before it came into possession of the Station, and was reduced to a very low state of productiveness. On this farm a five-year rotation, of corn, oats, wheat, clover and timothy, has been maintained since 1894, the rotation being so planned that each crop is represented every season.

Part of the land in this experiment has had no fertilizer or manure of any description since the test began; another part has had acid phosphate only, used at the rate of 80 pounds per acre each on corn and oats and 160 pounds on wheat, making a total of 320 pounds for each 5-year period. Another part has received the same quantities of acid phosphate, with 260 pounds of muriate of potash in addition—80 pounds each on corn and oats and 100 pounds on wheat. Still another part has received the same quantities of acid phosphate and muriate of potash, with 400 pounds nitrate of soda—160 pounds each on corn, oats and wheat. The total cost per acre for these different combinations of fertilizing materials for each 5-year period has been as follows:

For acid phosphate alone	\$ 2.40
For acid phosphate and muriate of potash...	8.90
For acid phosphate, muriate of potash and nitrate of soda	20.90

The average yield of wheat on the unfertilized land for the twelve years, 1894 to 1905, inclusive, has been 8.6 bushels per acre. This yield has been increased by the different fertilizing mixtures to the following 12-year averages:

By acid phosphate alone	15.9 bus.
By acid phosphate and muriate of potash...	17.5 bus.
By acid phosphate, muriate of potash and nitrate of soda	24.3 bus.

If we value wheat at one dollar per bushel, corn at half a dollar, oats at one-third of a dollar, hay at eight dollars per ton, corn stover (fodder) at three dollars and straw at two dollars, the total increase from all the crops for each rotation in this experiment would have the following total and net values, the net value being obtained by deducting the cost of the fertilizer:

	Total	Net
From acid phosphate alone	\$16.72	\$14.32
From acid phosphate and muriate of potash	24.08	15.18
From acid phosphate, muriate of potash and nitrate of soda	40.72	19.82

It is apparent that on this worn soil the complete fertilizer, containing nitrogen and potassium as well as phosphorus, has produced by far the most profitable increase of crop, although the cost of this fertilizer has been more than eight times as great as that of acid phosphate alone.

In another experiment on this same farm, corn, wheat and clover have been grown in a 3-year rotation since 1897. Part of the land in this test has received no manure nor fertilizer, while a part has been manured for the corn crop with cattle manure, used in all cases at the rate of 8 tons per acre and plowed under, the corn being followed by wheat and clover without further manuring or fertilizing. Part of this manure has been taken from an open barnyard, where it has lain during the winter; part has been allowed to accumulate under the feet of the cattle in their stalls until it could be hauled directly to the field, and with a third part—also stall manure—acid phosphate has been incorporated during accumulation, the phosphate being used at the rate of 40 pounds per ton of manure, or 320 pounds per acre.

In this test the unmanured land has produced an average yield of 8.9 bushels of wheat per acre; the yard manure has increased the average yield to 16.3 bushels, the untreated stall manure to 17.9 bushels, and the phosphated stall manure to 24.2 bushels.

Taking all the crops of the rotation, and estimating their value as before, the total value of the increase from each method of treatment has been as below:

From 8 tons yard manure, untreated.....	\$20.35
From 8 tons stall manure, untreated.....	27.58
From 8 tons stall manure, phosphated.....	44.35

The nitrate of soda and muriate of potash used in the first experiment have cost \$18.50 per acre for each rotation, and have been paid for with a large profit besides, in the increase of crop; but the 8 tons of stable manure, used in connection with the same quantity of acid phosphate, has produced a much greater increase of crop than these expensive chemicals.

These experiments demonstrate the vast importance of furnishing the wheat crop with an abundant supply of nitrogen and potash, as well as of phosphorus, when it is grown on worn land, and show that in farm manure we have a most effective source of nitrogen and potash, the value of which may be more than doubled by protection from the weather and reinforcement with phosphorus.—*Experiment Station, Wooster, O.*

IMPROVING THE CORN CROP.

That corn can be grown profitably in Virginia is shown by the fact that the value of the crop per acre is \$11.55, whereas, in Illinois for a much larger yield it is only \$11.59. Therefore, by increasing the yield through systematic cultivation and fertilization, there is a decided profit in sight for our farmers. The selection of a variety and its adaptation to the soil and climatic conditions in which it is to be grown will influence the yield of corn decidedly. Ten varieties grown for three years showed some of these remarkable differences. The height varied from 90 to 115 inches; the yield of green stover from 5.86 to 9.99 tons; the yield from 26.95 to 46.87 bushels; the per cent of cob from 13.09 to 25.07; and the weight per bushel from 64.43 to 74.77 bushels. Selecting the right variety is therefore a matter of great importance. A mechanical selection of ten bushels of Leaming corn showed that only one-half of the ears shelled out 82.26 per cent, yet this variety had been grown with more or less care for several years.

Some of the thoroughbred ears sown on the experimental plats the past season shelled out 91 to 92 per cent. The selection of an ear showing a high per cent of grain and a small per cent of cob is thus a matter of vital concern in the improvement of corn. The best type of ear to use is one weighing from 12 to 16 ounces, having from 16 to 24 rows of grain and uniform in size from the but to tip. If great prolificacy is desired select a smaller type of ear and choose the seed grain only from those stalks containing two ears. One hundred grains were selected from 16 samples of corn and weighed with the following results: The lightest weighed 26 grams, or less than one ounce; the heaviest 52 grams or almost 2 ounces. The variation in germination was represented by 53 and 100 per cent. Here again the question of individual selection for type, shape, weight and germinating power comes in for consideration.

The permanent improvement of corn depends, first on the careful preparation and fertilization of the soil; second, on the selection of a suitable variety; third, on the systematic improvement of this variety with regard to shape and type of ear, the size, height and character of the stalk and leaf and the shape, quality and condition of the grain. Any farmer by making a careful selection from the best individual plants in his field from year to year can secure a uniform type of ear which will shell out a higher per cent of grain, show a flintier type

of kernel and possessed of a desirable type of stalk, neither too large nor too small. By attention to these points the yield of corn on Virginia farms can be increased from 5 to 10 bushels per acre. Surely this is a reward worth striving for.

ANDREW M. SOULE,
Dean and Director.

SOY BEANS.

Soy beans deserve to be used more than they are. They are better feed than peas and are somewhat easier to cure. Also, they will stand wet and cold better. They have an advantage over peas also in the fact that seed of them need not be saved by hand picking. Indeed, if farm help keeps on getting scarce, it will soon be impossible to get peas picked by hand, and seed peas will become scarce and high-priced, so we can't afford to use them. But soy beans can be threshed out like wheat; and for just home use the ripe beans can be beaten out with sticks in a tight wagon body and fanned at leisure. There is one fact in regard to soy bean seeds which those who raise them must never lose sight of. They are extremely liable to heat or sour if put away in bulk the least damp. They are difficult to handle without shattering when dry; in fact, must be somewhat damp to handle at all. Hence the necessity of drying them thoroughly before putting in bulk. Had I a large lot of them to keep, I would mix powdered quick lime with them to absorb surplus moisture. I have raised my own seed, also have purchased from several dealers and am bound to say that in many instances I found the vitality of the seed hurt by souring or heating in bulk to a serious extent. Yet, strange to say, soy beans will live over winter in the pod and come up as "volunteers" in spring even where overflowed several times.

JOSHUA FRANKLIN.

A GREAT HAY CROP.

It is reported that one farmer in Franklin county, Virginia, has cut 3,000 tons of timothy hay from 1,200 acres of land, or an average of $2\frac{1}{2}$ tons of hay per acre. This, at the average market price of \$15 per ton, is worth \$45,000—equal to \$37.50 per acre, or the fee simple value of the land realized from one crop of hay. Yet, with such possibilities as this, Virginia farmers buy hay every year and nearly the whole supply for the cities of the State comes from the West.

SYSTEM AND ROTATION IN COTTON CULTURE.

Editor Southern Planter:

While we are a diversificationist in the fullest and broadest sense of the term, we are most decidedly opposed to an "aimless diversification."

While we are most decidedly friendly to fertilizing agents, we are opposed to the indiscriminate and irrational purchase and application of them so much in vogue at this present time; and, while we favor, advocate and practice a judicious, systematic rotation, and believe that soil fertility can not possibly be conserved without it, coupled with the judicious use of manures, and though we realize to the fullest extent that the very salvation of the South and Southern soils, together with the prosperity of Southern soil tillers and the permanent welfare and happiness of their families, is more largely dependent on this same "judicious, systematic rotation" than upon any other influencing or controlling factor that could be brought to bear upon them, or be practiced by them; we are opposed to "cast iron," inflexible systems that fix upon any rotation and carry it out on all farms, in all sections of the South, regardless of the widely differing textures of the different classes of soil, and of the existing conditions and environments of the soil tillers themselves in the many very differently circumstanced as well as widely differing sections of this truly Heaven-favored country.

"Adaptiveness" of crops to 1st soils; 2d, the needs of each individual cultivator, and, 3rd, his markets, must be given due consideration, as they are really the controlling factor in each individual case. In rotation, as in everything else, "What is one man's meat may be another's poison."

For this reason, let the rotation be a "two-year" (cotton followed by corn and peas, peas to be gathered for seed or hogged down) rotation; a "three-year" (cotton followed by corn and peas, the corn and peas to be followed by oats and the oats by peas to be mown for hay) rotation; or, in fact, let the rotation be what it may, in order to secure the needed supply of nitrogen from atmospheric sources, in order to keep the soil in the best possible mechanical condition; in order to make the very best use of the soil-water; in order to accomplish the hitherto impracticable (and under the old system impossible) feat of manuring all land at least once in each circle of rotation; in short, in order to maintain and even increase fertility, making poor land rich and

rich land richer, there must be a recuperative crop planted on each and every acre in the rotation, as often as every other year. While it is a mistaken idea that fertilizers must only be put under those crops called "money crops," or those that bring a direct money return; we believe it to be good, sound, business policy to—in planning your rotation—give the crop you propose getting your surplus money out of the most advantageous place in the rotation; and, in addition to letting cotton follow peas, fertilize it liberally besides. Use your chemical fertilizers on the cash crop (cotton), tobacco, oats, wheat, potatoes or melons; your barnyard and stable manure on the corn; your phosphates and potash on the peas; and a combination (or rotation) of both manure and commercial fertilizers for garden vegetables and "truck" of all kinds.

All lands that will not readily average a half bale per acre may be classed as "poor lands," they should receive a liberal dressing (300 to 600 pounds per acre) of a 10-4 "Bone and Potash" fertilizer and be sown down to peas. From a half bale to a bale per acre lands may be classed as "medium" lands, and need peas every alternate year to keep up their needed supply of nitrogen and humus and the application of 400 to 800 pounds of a "complete" high-grade fertilizer, analyzing about 10-3-6 per acre. This is the way to increase the yield from one bale to two or more per acre.

Lands yielding, without fertilizer, from one bale to a bale and a half or even two bales per acre, do not need peas, nor stable manure, nor, indeed, nitrogenous fertilizers; (if we except 100 to 200 pounds of nitrate of soda which may be applied as soon as crop is up and stand secured, to start the crop off into early, active vigorous growth); but they do need a "Bone and Potash" fertilizer, analyzing about 10-0-4 at the rate of 1,000 or more pounds per acre to increase fruitage of the plant and force an early maturity. There is no necessity of being afraid of these large amounts, we have used 1,000, 2,000 and even 4,000 pounds per single acre, applied broadcast, and always with satisfaction, pleasure and profit.

G. H. TURNER.

MR. CLARK'S HAY CROP.

In the August issue of *THE PLANTER* we published an article from Mr. Clark giving particulars of his great hay crop for this year. In that article the following paragraph appeared: "I have heretofore removed 15,000 tons of rock to the acre, and now,

when seeding with the aid of my Double-Action Cut-away Harrow and my 26 Reversible Sulky Disc plow found and removed over 100 tons more of rocks and stones." We, as well as several of our readers, were struck with the enormous figures mentioned and were afraid that our compositors had made an error, but reference to the copy showed that the types were not at fault. Realizing, however, that some mistake had been made somewhere, we wrote Mr. Clark on the subject, and he has written us in reply that what he did say, or intended to say, was that he had removed over 16,000 tons of rock from 16 acres, over 1,000 tons per acre. This quantity he ascertained by actual measurement in trenches into which he piled the rock and buried it. Evidently his stenographer misunderstood him, and hence the exaggerated figures given in the copy. However, 1,000 tons of rock to the acre is a pretty good supply of an undesirable article requiring to be removed before cultivation was practicable. We make this explanation in justice to Mr. Clark and ourselves. Mr. Clark is a most reliable man and not knowingly given to exaggeration in any statement he makes.

COUNTRY DEMAND FOR EWES.

Breeding ewes are outselling killing stuff in market circles at present. Any old ewe, no matter how thin provided it has a good mouth, is in demand to fill country orders. Stock ewes by the thousands have been taken out by those who are anxious to found flocks, weight being no handicap where quality exists. Breeders have given killers such keen competition that the normal spread in prices between ewes and wethers has been practically effaced at times and the unusual spectacle of ewes selling for breeding purposes at a premium of 25 cents per cwt. over what killers were willing to pay has been witnessed.

But open market transactions in breeding stock by no means represent the volume of that business nor indicate the rapidity with which the corn-belt is being stocked. Country buyers report that they are seldom able to ship their ewe purchases to market, finding buyers at home on better terms than could be obtained in stock yard circles. Five cents is now a common price for ewes in the country. Two years ago they went begging at half that figure.

The avidity with which ewes are being absorbed by farmers is indicated by the experience of one Chicago speculator who three months ago had the foresight to contract 60,000 on the northwestern range. A small

advertisement in a few papers fairly inundated his mail with anxious inquiry from all over the United States. He cleaned up about \$100,000 on his venture and could have sold twice the number had they been in his possession. Orders came from localities as far east as New York and south to Virginia and Tennessee. A few days ago a band of about 1,000, 90-pound Merino ewes from Montana reached the Chicago yards. A killer offered \$5.10 with a 20 per cent sort. An Ohio buyer standing by remarked: "I'll give \$5.10 for the whole string straight." He sold the lot in his own locality at \$6 a head and was speedily back looking for more. The life of many a ewe has been indefinitely prolonged by the boom in wool and mutton and thousands of native ewe lambs that under normal conditions would have gone to the shamble are being nursed to maturity as if they were valuable from a zoological standpoint. A ewe lamb is rarely seen in market circles now.—*Breeders Gazette.*

IMPROVING LAND.

Being a subscriber to your excellent paper, and being a new comer to a worn-out farm, would like to know what is the best to do this fall. I planted about ten acres in corn, cultivated it flat and sowed German clover. The balance of the land, about twenty acres, planted in peas to plow down.

Now, how is the best way to get a pasture, and would I be able to get a crop of hay next season? I am going to put in a few acres in oats to cut for hay. Could I seed grass seed with the oats? What quantities and varieties should be sown? I intend to lime the most of the land this winter. How is gas lime? What is best to sow for sheep?

Any advice will be gladly received.

NEW COMER.

Chesterfield County, Va.

Plow the peas down and sow a mixture of crimson clover, wheat, oats and rye; 10 pounds of clover, 1 bushel of the mixed grain. This will give you a pasture in winter and spring and up to June if not wanted for hay. If wanted for hay take off stock in March and cut for hay in May or June. Then plow down the sod and plant peas or peas and sorghum. This will give you another hay crop in the fall. After cutting this plow the stubble down and seed in crimson clover and mixed grain. Follow this rotation for two or three years, applying all the barnyard manure you can make or get to the land, and, also, for each crop of peas and clover, 200 or 300 pounds of acid phosphate per acre. You may then succeed with grass seeded alone.—Ed.

SPECIAL REPORT OF THE AMERICAN
POMOLOGICAL SOCIETY.

A copy of the recent report of the American Pomological Society is now on my table. The report is a departure from the usual ones of the Society in that it contains data gained from the great fruit exhibits of St. Louis, and special reports on the cherry, plum, peach, pear, grape and small fruits. The data on the apple were so numerous that the special committee that had this subject in charge has been unable so far to prepare the matter for publication. This may be published later by the Society and would be of more special interest, perhaps, to the largest number of Virginia horticulturists.

The report on the cherry is a real contribution to the literature of this fruit. It is by far the best report on this fruit for United States that has ever been published. The information in it is valuable for the large grower, the small grower, the teacher and student.

The reports on the other fruits, while not so exhaustive as that upon the cherry, contain many practical points for the grower. This report may be had by paying the biennial membership fee of two dollars. Prof. John Craig, Ithaca, N. Y., is the secretary.

R. H. PRICE.

TEXAS FEVER QUARANTINE.

Dr. J. G. Ferneyhough, the State Veterinarian of Virginia, and the Hon. J. Thompson Brown, the Chairman of the State Board of Control in charge of quarantine matters, have been in attendance upon the Convention of State Live Stock Sanitary Boards at Guthrie, Oklahoma. They recommended that in future the quarantine against Southern cattle should be raised on November 15th and closed on March 15th, instead of continuing, as at present, from November 1st to February 1st. If they can succeed in getting the assent of the National Government to this alteration of dates, it will prove of great help to Southern live stock interests as it will practically give us an open winter market. We believe that the change can be safely made, as our Southern winter does not usually begin so early as November 1st, and yet always continues sufficiently cold after the middle of November to prevent tick infestation up to March 1st. We frequently have it warm enough for ticks to infest cattle up to the middle of November, but rarely is it warm enough after that time until after the middle of March for danger to be apprehended.

IMPROVING LAND.

I have about five acres of land, the southern slope of a hill. I wish to improve it this fall and winter and plant it to corn next spring. The soil is light and sandy, and in a neglected condition. You will please advise me through the next issue of *THE PLANTER* what crop I can plant to the best advantage to be fed to stock and a part to be plowed under early in the spring. Any other information concerning the preparation of land, present and future, would be appreciated by me, a young farmer.

J. B. L.

Charleston County, S. C.

Sow a mixture of crimson clover, wheat, oats and rye on the land. Ten pounds of clover, one bushel of the grain. If possible give the land a good dressing of farmyard manure. If you can not do this before seeding, apply as a top dressing in winter. Apply 200 pounds of acid phosphate and 50 pounds of muriate of potash per acre before sowing the clover and grain.

HEAVES.

Can you give me, in your next issue, treatment for horse with heaves? I have a fine mare so affected. Can it be cured?

JNO. S. FLEMING, JR.

Amelia County, Va.

Heaves when once established is incurable. The best that can be done is to palliate the trouble by careful attention to diet. Don't give bulky food, but nutritious food in small compass—like oats and the best hay free from mould or dust. Feed regularly and don't work immediately after feeding. Arsenic is the only remedy efficacious in palliating the symptoms. A tablespoonful of the solution of arsenic in hydrochloric acid should be given in bran and oats two or three times a day for about two weeks; then the dose should be gradually reduced by giving once a day for a week or two longer.—Ed.

One of the greatest difficulties in controlling a plant trotting bred foals in the vicinity is the bay filly, foal of 1905, by Direct, 2:05¼, dam *Serpentina*, by *Manbrine Boy*, 2:26¼, second dam the noted brood mare *Remembrance*, dam of *Virginia Jim*, 2:12½, etc., by *George Wilkes*. Bred and owned by A. T. Griffith, of this city, this filly is entered in close to \$50,000 worth of stakes. Her engagements will be kept up and high hopes are centered in the future of the daughter of the famous dead sire *Direct*.

THE Southern Planter

PUBLISHED BY
THE SOUTHERN PLANTER PUBLISHING CO.,
RICHMOND, VA.
ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.

B. MORGAN SHEPHERD,
Business Manager.

ADVERTISING RATES
will be furnished on application.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

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REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticisms of Articles, Suggestions How to Improve THE SOUTHERN PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejection matter will be returned on receipt of postmaster.

NO ANONYMOUS communications or enquiries will receive attention.

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To Advertisers.

Be sure to send in your copy or instructions on or before the 25th of the month for the following month's issue. This is imperative.

PUBLISHER'S NOTES.

THE PRINTERS' STRIKE.

On Sept. 11th, the International Typographical Union called a general strike throughout the Eastern section of the United States, thereby involving all of the larger printing houses, our publishing house being among those affected. It has been with some difficulty and inconvenience that this issue was gotten out. We thank our friends for their kindness in not changing their advertisements and otherwise aiding us. From present appearances, we will be out on time next month with a splendid issue, and hope to make good any shortcomings in the current issue. We have nothing to do with the controversy between the employers and their printers, but we are getting plenty of trouble out of it.

Subscription Offer.

For 50 cents we will send the SOUTHERN PLANTER to any one who is *not now* a subscriber, until the end of next year. In other words, we will throw in the remaining numbers of this year and start the subscription with our next January issue, which will be our usual Holiday Number.

WITH THE ADVERTISERS.

The Glen Mfg. Co. is advertising its well-known *Hammam Woven Wire Fence*.

M. T. Phillips has a card in this issue offering his *Keystone Dehorer*.

The New Holland Mch. Co. offers its splendid *Feed Mill* to our readers again this season.

The Black Hawk Corn Sheller is a handy little tool, advertised by A. H. Patch.

The Williams Pump Co. is a new advertiser this month.

The Folding Sawing Machine Co. starts the season's advertising with this number.

The Cadiz Electric Co. has something

Wood's Seeds.

Vetches.

The HAIRY WINTER or SANDVETCH makes a hay or forage crop superior in feeding and nutritive qualities to Timothy Hay. It will also make the largest yield of dry feed of any crop that can be sown in the Fall. In this respect it is superior to Crimson Clover as it not only makes a larger yield than that crop, but is very much superior in feeding qualities.

Wood's Fall Catalogue tells all about Seeds for Fall Planting, Seed Wheat, Oats, Rye, Barley, Vetches, Grass and Clover Seeds, etc.

Write for Catalogue and prices of any Seeds desired.

T. W. WOOD & SONS,
Seedsmen, Richmond, Va.

Wood's Fall Catalogue also tells about Vegetable and Flower Seeds, Strawberry and Vegetable Plants, Lawn Grass, Hyacinths, Tulips, etc. Catalogue mailed free upon request.

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"EVERYBODY'S FRIEND"
ALL TOOL SELLERS
AGENTS FINE SAMPLE OF
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EVER PUT ON THE
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EITHER LIGHT OR HEAVY
LITTLE GIANT
HAY PRESS CO.
DALLAS, TEXAS
WRITE FOR PARTICULARS
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Cures Eczema.

S. B. Hartin, of Ridgway, S. C., writes Nov. 25, 1904:
"Your 'Tetterine' does the eczema on my mother's hands more good than anything we have ever found."
Tetterine is a prompt and effective cure for ring worm, eczema, erysipelas, chafe and all diseases of the skin. At all druggists, or send 50c. to J. T. Shuptrine, Savannah, Ga., for box postpaid.
Bathe with elegant Tetterine Soap, 25c. cake.

BANK OF RICHMOND,

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CAPITAL AND PROFITS, - - - \$1,134,938.14.

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A low wagon at a low price. Handy for the farmer. Will carry a load anywhere a horse can travel.

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Steel Wheels

For farm wagons. Straight or staggered spokes. Any size wanted, any width of tire. Hubs to fit any axle. For catalogue and prices, write to:

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You Can Judge.

We'll send the Mill—we're not afraid. You try its speed, its strength, the kind of grinding. Compare with others. No sale and no cost to you if you are not pleased with the

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The low priced mill that does every kind ear corn and grain grinding, coarse or fine. Makes excellent table meal. A rapid grinder and is strong and easy running. Several styles and sizes. With or without elevator and bagger. We also have the best and fastest cutting Wood Sawn. Send for free booklets.

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interesting to say to farmers about telephones.

The Star Mfg. Co. offers its Feed Mill in another column. Look up the ad.

We invite attention to "Fence Talks" the attractive announcement of the American Steel & Wire Co.

The Enterprise Mfg. Co. of Pa., has an attractive ad. on another page.

The Massey Business College has an announcement on another page, which should interest farmer's sons and daughters.

Johnston, Holloway & Co.'s preparations will be offered our readers regularly hereafter.

Strawberry Hill Poultry Yards are making a special offer on their fine stock just now.

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The Monarch Grubber Co. has a card in this issue. Look it up.

Mr. H. B. Roberts is offering some finely-bred Berkshire boars.

Powderpaint, offered by Mr. A. L. Rice, merits your investigation.

THE STINGING FLANNEL WORM.

The Biologist of the North Carolina Department of Agriculture has recently received several specimens of a very hairy caterpillar, which resembles a snail rather than an ordinary leaf-eating worm. This creature is thickly covered with long yellowish hairs, causing it to resemble somewhat a piece of heavy flannel—hence the common name. The worm does not eat flannels. It eats the leaves of the oak and other shade trees, and also occurs upon rose bushes. In Florida, where this worm is more common, it infests the orange tree. In North Carolina the worm is not abundant enough to do serious damage to trees, but when it infests trees or shrubs in dooryards people are liable to get stung by the sharp and poisonous hairs of the creature. Several of our correspondents have reported that those incautiously handling the worm have had their hands and arms badly inflamed and swollen.

The best remedy for the sting of this worm is oil of turpentine, well rubbed into the inflamed parts. A mixture of oil of myrrh, 10 parts, and laudanum, 1 part, is also efficient. The worms can be destroyed by dusting the foliage upon which they feed with a powder composed of one part Paris green and ten parts air-slaked lime.

GERALD MCCARTHY, Biologist.
N. C. Department of Agriculture.

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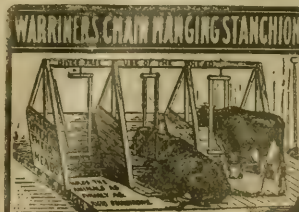
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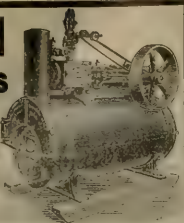
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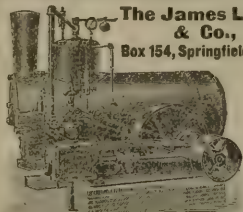
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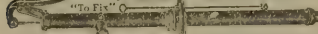
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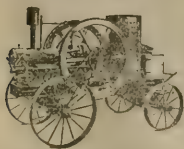


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Patent Washes Against San Jose Scale.

Virginia Experiment Station, Blacksburg, Va. Bulletin, 153. The Horn Fly.

Virginia Experiment Station, Blacksburg, Va. Bulletin 154. The Inoculation and Cultivation of Alfalfa.

Virginia Experiment Station, Blacksburg, Va. Bulletin 155. Meteorological Data and Bloom Notes of Fruits.

West Virginia Experiment Station, Morgantown, W. Va. Bulletin 96. A Report on Plant Diseases of the State.

American Breeders' Association, Washington, D. C. Vol. 1., 1905. Proceedings of First Meeting Dec. 29 and 30, 1903. Proceedings of Second Meeting, Feb. 1-3, 1905. W. M. Hays, Secretary, Washington, D. C. This association has been formed for, and is investigating all questions of breeding in plant and animal life, and great results are expected from its labors. The report contains some most interesting papers on different breeding questions affecting corn, cotton, soy beans, alfalfa, cattle, etc. The annual fee for membership entitling the member to copy of all reports, is \$1.00.

CATALOGUES.

Peter Henderson & Co., New York, Agricultural Seeds for fall sowing.

W. H. Coffman, Bluefield, W. Va., Catalogue of large English and American Berkshire hogs.

Premium list North Carolina State Fair, Raleigh, October 16 to 21, 1905.

We note the recent death of Mr. Cyrus M. Avery, of Peoria, Ill., the head of the Avery Mfg. Co., whose line of agricultural implements is so well known. Mr. Avery was the founder of the business and began in a very small way, but by perseverance and industry and integrity, built up a great business.

SOLD OUT.

One of Nantucket's summer visitors strolled into the little shop kept by an old man, a native of the place.

In looking about she found a kind of linen cloth which she bought for fancy work. Some friends who saw and liked it went to the shop and purchased all that remained.

In a few days the proprietor went to the "mainland" to replenish his stock, and bought more of the same goods, which, also, was soon sold.

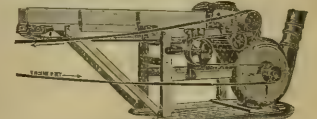
"Well!" exclaimed Uncle Hi as the last yard went, "if any more of you folks want that stuff you can go up ter mainland an' git it. I can't keep nothing in this here shop!"—Lippincott's.

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has no equal. Made in sizes to suit everybody. Exceeds all other makes for cutting either dry material or ensilage. Up-to-date in every particular. Strong, durable, runs lightly and smoothly. Furnished with Chain Carriers or Blowers. Blower case made of cast iron, without seams or joints, consequently stiff, strong and SAFE. The TORNADO puts 20 per cent. more cut ensilage into a given space or silo than can be done by any other make of cutter.



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Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the sub-
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cellent machine for
covering in sugar cane.
strength guaranteed.

Can plow a newly cut
forest, stump, bush, or
bog land, leaves land true, clean for any crop.

Clark's Double Action Cut-
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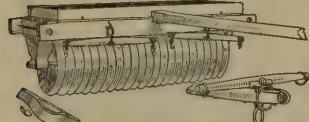


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to ten inches deep; 14
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No side draft. No similar

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guarantee them to kill wild mustard, charlock,
hard hack, sundower, milk weed, morning glory,
Russian thistle or any other foul plant that
grows, or money refunded. Now is the time to
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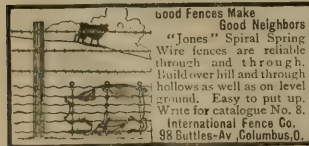
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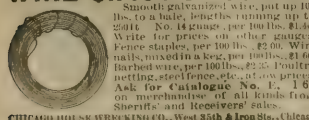
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Wire fences are reliable
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WIRE-\$1.40 Per 100 Lbs.



Smooth galvanized wire, put up 100
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on merchandise of all kinds from
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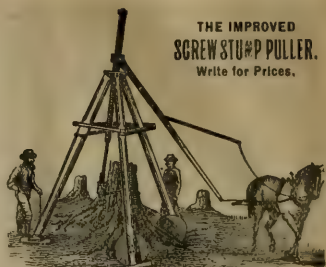
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DIETARY STANDARDS.

What Observation Indicates to Be the
Average Man's Daily Food Need.
October Century.

Accepting the daily dietary standards
previously enumerated, and which are
based upon observations as to what
people are accustomed to consume, it
is plain that the average man doing farm
light to moderate muscular work must
take each day approximately 116 grams
of proteid matter (18 grams of nitro-
gen), with sufficient fat and carbohy-
drate to yield a total fuel value of 3050
large calories. The usual proportion of
carbohydrate (mostly starchy food) is
about 500 grams to 50-60 grams of fat.
In other words, the average man needs,
according to the above hypothesis, ap-
proximately 120 grams of proteid, 500
grams of carbohydrate and 60 grams of
fat for his daily ration. In order to ob-
tain these amounts of nutrients he
would require, per day, three-fourths of
a pound of ordinary roast beef, one
pound of boiled potato, one-half pound
of white bread and one-fourth of a
pound of butter. Naturally, much greater
variety of food might be adopted with
the same nutritive values as the
above; but these figures will suffice to
give some impression of the quantities
of ordinary cooked foodstuffs required
to yield the nitrogen and the total fuel
value called for by the above standard
dietary.

A more elaborate diet, one in large
measure free from meat and having es-
sentially the same content of nitrogen,
and with a total fuel value of approxi-
mately 3,000 calories, would be as fol-
lows: Fried hominy, six ounces; syrup,
three ounces; baked potato, eight
ounces; butter, one and one-half ounces;
baked spaghetti, ten ounces; mashed po-
tato, ten ounces; boiled turnip, eight
ounces; bread 2 ounces, apple sauce, 8
ounces; apple-tapioca pudding, twelve
ounces; fried sweet potato, eight ounces;
fried bacon, one ounce; fruit jam, four
ounces; coffee, one and one-half pints;
and tea, three-fourths of a pint. Such
a diet, owing to its vegetable nature and
lack of concentration, is naturally quite
voluminous. A greater concentration of
diet is easily obtained by replacement of
a portion of the vegetable matter by
meat; and this the ordinary man, with
his highly developed palate, usually pre-
fers to do, because of the increased flavor
which his acquired taste now calls for.
Further, the resources at the command
of the civilized man render possible
great variety in matters of diet; but
whatever the character of the daily food,
or however great the number and var-
iety of the ingredients, it will be found
that the nitrogen and fuel value of the
daily food of mankind will in general
correspond in large measure to the
dietary standards usually adopted through-
out the civilized world.



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8000 STUMP PULLER.
Write for Prices.

Chamberlin Mfg Co., Olean, N. Y., U. S. A.

HERCULES Stump Puller



Clears an acre of heavy timber land each
day. Clears all stumps in a circle of 150
feet without moving or changing machine.
Strongest, most rapid working and best made.

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413 17th St., Centerville, Iowa.



The Monarch Stump Puller.

The best on earth;
you make no mistake
in buying of a man
of 5 years' experi-
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stumps. We set up
the Puller and guar-
antee satisfaction be-
fore we want your
money. 5 sizes.

Write for catalogue and prices.
JOS. W. RITCHIE, State Agent, R. F. D. No. 39, Grottoes, Va.

Monarch Stump Puller.

Will pull stumps seven
feet in diameter.
Guaranteed for 12 mos.
and a strain of 250,000
pounds. Address,
MONARCH GRUBBER
CO., LONE TREE, IOWA.



We Will Give A RURAL MAIL BOX.
The best and handiest
Galvanized Steel Rural Mail Box made, to the first
person sending address of party canvassing for peti-
tions for new 1 and 2 knot. Write today.
KENTUCKY STAMPING CO., DEPT. 35 LOUISVILLE, KY.

MEMORIES OF THE HAZOR-BACK.

The old-fashioned "razor-back" hog, which ran wild and fed chiefly on acorns, made the sweetest of all pork and the most toothsome of breakfast bacon.—Ladonia News.

You bet it did. What boy reared in the white-oak or hickory-ridge sections of Tennessee or Alabama can ever forget the old razor-back or the feasts that its carcass furnished? When hog-killing time ushered in the heyday of sweetbreads and sausages, the average would crowd joys of a thousand years into one day. One of those fresh diners was worth a dozen a la carte whirls at Delmonico's. And then, when the lazy-feeling summertime—the weather that puts all of a boy except his appetite in the dormant state—came on, what a feast was that dish of crisp-fried streak-o-lean and streak-o-fat! Talk about your Berkshires, your Poland Chinas and your Red Duroc, they're not in the Razor-back's class when it comes to furnishing meats of heavenly flavor!

But, there's a thorn for every rose. It is impossible to think of the Razor-back without remembering the pure cussedness of his being and the despicable traits that were as thick in his heart as the bristles on his back. There was never a gate that he couldn't throw flat as a flounder with that case-hardened bugle-shaped snout of his. There was never a rail fence that he couldn't lay low in the night-time when the corn was ripening; and he always invited the whole porcine family to go in and eat with him. O, were you ne'er a farmer's boy, and were you never batted out of bed with a board in the early morning and told to go and run old Mol and her regiment of shoats out of the corn patch? If you ever were you remember how you hunted until you found the rent made in the fence by the razor-back. Then, to make an easy exit for Mol and the shoats you widened the gap and lowered it by removing rails. Then you sallied forth in the tall, dewy grass and corn and soon were as wet from head to foot as if you had just arisen from the baptismal waters to walk in newness of life. At the far corner of the field you started Mol and the shoats in a long gallop toward the gap, quickening their pace ever and anon with clods, and occasionally dropping a cuss word to accelerate the speed of the stubborn swine. After a long run, in which countless saw-briars raked your bare feet and ankles and myriads of bull-nettles pierced your legs, the gap was reached—but Mol went by like a limited express passing a flag station, and every son-of-a-gun of a shoat followed her. Around the field you gave chase again, this time drawing heavily upon your vocabulary of profanity and heaving the heaviest chunks you could toss at the heads of the hated swine. Again they passed the gap in a long gallop, and then did a kind Providence release your foun-

American Fence Talks

By the Makers

The structure of the American Fence is perfect. It is built of big, solid, lateral wires, with the upright or stay wires hinged. This is the most perfect structure for a square mesh fence, and is covered by patents which cannot be assailed.

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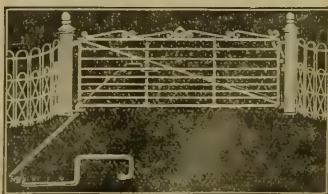
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tain of tears and a kind Satan furnish perfect gems of profanity, which you slung at the porcine imps with all the vim of a Populist orator lambasting a plutocrat. But worse!—just then you looked through the binding tears and found yourself face to face with pater familias, armed with a per-simmon sprout! Here, dear reader, allow me to draw the curtain. There are depths of sorrow that we dare not invade even retrospectively—

You may break, you may burn every limb if you will,
But the hurt of that 'simmon sprout
will wind round you still.

—Honey Grove Signal.

BLACK RUST OF COTTON.

The North Carolina Department of Agriculture has since December 1, received numerous samples of diseased cotton-bolls showing blackened surface, and in many cases having the immature lint exposed and rotten.

These diseased bolls show the presence of the spores or reproductive part of a parasitic fungus, *Colletotrichum Gossypium*. The fungus seems to be spreading in North Carolina and already does very serious damage. The estimate damage now caused is about one-half the normal yield of the infected areas.

The spores, or so-called seeds of the fungus live over winter in the diseased bolls and stalks of the preceding crop usually left in the field. The spores also undoubtedly live upon the seed stored in barns and cotton gins. When this seed is planted, or when uninfected seed and grows up through the young plants eventually coming to the surface of the stalks and forming black patches on stalk and boll.

Great damage is done to the growing crop by the threads of this fungus choking the sap vessels of the leaf-stalks, thereby causing the leaves to fall off. When young bolls are seriously infected they stop growth, open and expose the immature lint which soon rots.

The only practicable remedy for this disease is to rotate crops so that cotton will not come upon the same land oftener than once in three years. Seed cotton should never be taken from the piles at gin houses. The seed should always be carefully selected from healthy and prolific plants in the field. Such selection, together with a proper rotation will prevent the loss now caused by this disease, and will at the same time improve the strain and increase the yield of the crop.

The use of fungicidal sprays upon cotton is not recommended.

GERALD MCCARTHEY, Biologist,
N. C. Dept. of Agriculture.

Before marriage a man is generally greeted by his sweetheart with, "My darling, is it you?" But after marriage she generally rushes to the door and shouts, "John Henry, wipe your boots!"



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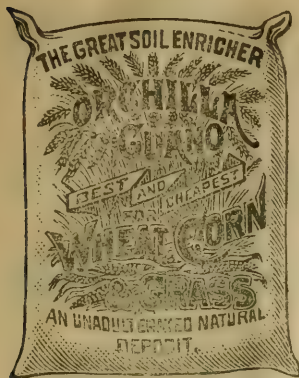
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A benevolent institution for care of the
poor consumptive and for the protection
of the community.

All are invited to membership.

HE FORGOT ONE SMITH.

The late General Fitzhugh Lee used to tell with great gusto an experience he had during his gubernatorial campaign in Virginia against Hon. John S. Wise:

"Mr. Wise made the statement," said the General, "that if I had been named Smith instead of Lee, I never would have been heard of. I endeavored to combat that theory, and in every speech I made during the campaign would touch upon Mr. Wise's statement and would then briefly refer to some famous historical figures, in order to show that the name Smith was not to be despised. "One day I spoke before a large crowd on the courthouse green in a rural community, and even before I began my speech I noticed a drunken man standing right up in the front row of listeners. I took up the Smith matter and informed those agriculturists what a distinguished family the Smiths had been. As I warmed up to the subject I noticed that something seemed to be worrying that drunken man, and more than once he seemed to be on the verge of interrupting me. I reminded my audience that a distinguished Governor of the State had borne the name of Smith, and that many other men famous in war and in peace had borne the despised cognomen. Meanwhile the drunken man watched me with ill-concealed anxiety. Finally, he could stand it no longer. Lifting his head and balancing himself with inebriated gravity, he blurted out, "Shay, Gen'ral, don't forget thash old Smith thash killed pocahontas!"—*Lippincott's*.

IN CASE OF BAD BLEEDING.

(St. Nicholas.)

"I know one thing," said John, "If you cut an artery, the blood is red and spurts; and if you cut a vein, the blood is blue and flows."

"That's right; but in real accidents you generally have both, and so there is a mixture of blue and red. If the bleeding is very bad, tie a large handkerchief around the injured arm or leg, with a knot over the artery about an inch above the cut. Slip a stick through the place where the handkerchief is tied, and twist it until the knot is pressed deeply against the artery. It would be well to tie a string around the arm over the other end of the stick to prevent its unwinding. In this way you compress and close the walls of the artery between the cut end and the heart, and thus you stop the bleeding. Cold or heat in any form also helps to stop bleeding, for they both help to clot the blood; and, of course, when the blood clots it acts like a stopper in a bottle, and so the blood ceases to flow out."

THE YOUTH'S COMPANION continues to delight the youth of both sexes and hold the interest of the old folks as well.

THE COSMOPOLITAN delights its readers with various topics and illustrations.

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Write for booklet giving plan and explaining how you can become a member of the...

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thus securing cheap fire protection. Property insured, \$400,000; average cost per \$1,000 per year, \$4.70. Memberships and risks limited to Eastern Va.

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Man Wanted.—I WANT A MARRIED WHITE MAN WITH

Son old enough to work to start in January 1st, next. Good house and garden furnished. Write me stating wages expected and give references.

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Wanted.—A first-class TRUCK FARMER and BAYMAN to run a rich 50 acre farm on shares; right at RICHMOND, VA. Man must be able to employ labor.

J. S. S. 311 Porter St., Manchester, Va.

THE CENTURY celebrates the one hundred and twenty-sixth anniversary of the battle between the Serapis and the Bonhomie Richard, September 23, with the issue of its October number containing General Horace Porter's account of "The Recovery of the Body of John Paul Jones." General Horace Porter, who gave of himself and his means so liberally to recover the remains of our first naval hero and to found a national shrine, here tells his own modest story of the difficult search, and its success and of the ceremonies in Paris attending the transfer of the body—a chapter of our history to thrill the heart of every American.

Whether the reader of the October Century turns first to this feature, or to the first chapters of Catharine A. Karl's record of her experiences "With the Empress Dowager," or to Dr. Thomas W. Evan's "The Empress Eugenie's Flight From Paris," or to the "Unknown Portraits of Shelley," here first brought to light, or to Russell H. Crittenden's discussion of "Economy in Food," or to Mr. Richard Watson Gilder's essay on the Brownings, or to the color reproduction of "The Sandman," by Maxfield Parrish, or to the fiction of the number, will depend upon the individual—the range is varied enough to appeal to every taste.

The complete novelette in the October Lippincott's is "A Manila Madness." Its author is Frederick Reddall, whose earlier works, "The Other Man" and "A Transaction in Rubies," have also been brought out by this magazine. His latest production is primarily a mystery story possessing an intense love-interest. The plot is hatched in Manila, but quickly shifts to New York City for the scene of its unraveling. In his portrayal of the character of the feminine Mr. Reddall seems to be particularly felicitous, and in the dramatic situation he excels. A millionaire, whose one cross in life is a nomadic son, tries to draw up his will so as to control the future of his boy and anchor him to civilization. In distant Manila the wanderer learns of his Father's taking-off and of the fortune that has been left to him—with "a string to it." Remorse and resentment fight for supremacy in facing these conditions. Then something happens—this something is the absorbing tale of "A Manila Madness."

LIPPINCOTT'S is happy to be able to present fiction by the Hon. John Hay. "The Blood Seedling" is a good story, well written, and rests not only upon the late author's distinguished name, but upon the sympathetic treatment of a strong plot.

In addition to the two longer stories there are eight—shorter ones of clever variety.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

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is only possible when the beard is thoroughly softened by the lather of

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TAKING CHANCES.

A small boy had been punished, and in consequence was feeling at enmity with all the world, but with his father in particular. When he came to say his prayers at night he gabbled through them at a high rate of speed, and while asking for the customary blessing on all the members of the family, including the cat, he left out his offending parent.

His mother understood, but thought it best to "appeal to his better self."

"Harold," she said sweetly, "what about papa? You forgot, dear."

"Didn't. Don't want papa blessed."

"Why, Harold! when you love him so? Just think, dear, papa has gone downtown now, and how would you feel if he got lost or hurt because you hadn't prayed for him?"

This rather worked on the boy's mind, and slowly he began to clamber out of bed, when, just as he got on his knees, he heard the familiar click of his father's key in the lock. "I guess I'll risk it," he announced, and quick as a wink jumped back into bed.—Lippincott's.

The first pages of the October St. NICHOLAS are given up to the memory of Mrs. Mary Mapes Dodge, the magazine's editor for so many years, whose death occurred just as the October number was going to press. Mr. Richard Watson Gilder writes sympathetically:

Many the laurels her bright spirit

won;

Now that through tears we read

"The End,"

The brightest leaf of all—now all is done—

Is this "She was the children's friend."

The October St. NICHOLAS brings the conclusion—such a happy one as all good fairy tales should have—of L. Frank Baum's "Queen Zixi of Xi"; and another chapter in the funny adventures of "Pinkey Perkins: Just a Boy." There is an interesting description of the Panama Canal from Walter Kenyon, well illustrated; and readable accounts, by Helen D. van Eaton, of "Gunda," the young elephant in the Bronx Zoological Gardens, New York; "After Burgoyne's Surrender," by Klyda Richardson Steege; and "The Little Good Samaritan and the Tall, Tall Loaf," by Meredith Nugent. Isabel Gordon Curtis tells the story of "A Children's Celebration of Halloween"; and Ruth Kimball Gardiner of "Buttons and Buttonholes." Charles H. Caffin's series of papers on "How to Study Pictures" discusses this month Whistler and Sargent; Joseph H. Adams continues his talks to "The Practical Boy" with minute description of simple electrical apparatus; and Dr. E. E. Walker's October "First Aid to the Injured" paper gives directions for action in case of wounds and hemorrhages.

HARPER'S WEEKLY, under the able editorship of Colonel Geo. Harvey, lives up to its motto, "A journal of Civilization."

"Paste this in your Kennel Book."

"Llewellyn Setter,"

At Stud, Fee \$15.

COUNT'S ROWDY, by Lady's Count Gladstone, dam Jess, Rodfield. F. D. S. B. 1894; A. K. C. S. B. 64377.

Forty years ago, Mr. Purcell Llewellyn of England established the breed of "Llewellyn" Setters, with his dogs "Duke" and "Phoebe" (with a Laverack cross). A pure "Llewellyn" must trace back in an unbroken line to these two dogs "Champion Count Gladstone IV." and his son "Champion, Lady's Count Gladstone," are the most "dynamic" sires of late years, producing more Field Trial Winners of class, and the greatest dogs in America. Jesse Rodfield has proven herself the greatest dam of the day. She is the mother of Champion Prince Rodney, that Mr. Chas. B. Cooke sold for \$1200 last fall, and of the Field Trial winners, Jesse Rodfield's Count Gladstone, Count Whitestone, Count's Lit, Count's Blackie and Sure Shot. Count's Rowdy is a full brother to these dogs; a topnotcher afield, of good looks and a lovely disposition. Prove what I say by asking the best authority, The American Field.

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Sportsmen of the South will find in this dog perfection of breeding, conformation and shooting qualities, and a proven transmitter of the two latter. Nothing better with which to breed up the native or too inbred Llewellyn setters. Correspondence solicited. Fee, \$10.

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No. 16.—120 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$20 per acre.

No. 40.—133 acres; one mile from town, on fine McAdam road. Nice 7 room house, 3 porches. Good well and springs. Good barn, with stalls for 10 cows and 5 horses. Sheds for stock and machinery. All buildings in good repair. Fine for dairying. Land sandy loam and clay. Two acres in orchard; trees in full bearing. Price, \$5,000.

No. 41.—26 acres; 10 miles from Washington, D. C.; 2 miles from an electric and steam railroad. Thirteen room house in nice shaded lawn, 2 cellars, well, and house. Good orchard, in full bearing. All necessary out-buildings in good repair. Price, \$3,500.

No. 43.—30 acres; an elegant brown stone house, with 6 rooms, 2 porches. Three acres young orchard, in full bearing. All necessary out-buildings, in good repair. A large store mill building, with 2 sets of corn burrs, has 25 foot water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$3,200.

No. 47.—100 acres; 2 1/2 miles from railroad; 50 acres cleared, all level and in fine state of cultivation. New 5 room house. Stable for 4 horses and 6 cows. Young orchard. Good well at house. Situated on popular dirt pike, in Loudoun county. Price, \$2,500.

No. 50.—480 acres in Loudoun county, in the best grazing section of the State, all in grass; 12 room residence, situated on elevated ground in a large shaded lawn. An elegant large orchard in full bearing. Stabling for 60 cattle, farm grazed and fattened 65 export cattle last season. Well fenced, and an abundance of running water. Price, \$4,000 per acre.

No. 62.—636 acres excellent grazing, cleared land, well set in grass, and a little rolling. 250 acres fine white oak timber, balance of land cleared. Nice 4 room house, barn, 30x40, sheep house 20x30, and all the usual farm houses, all in good repair. Large orchard of all kinds of fruit, in full bearing. Farm watered by springs and streams, water in all the fields, land is all well fenced, has now about 40 large cattle, in addition to sheep, horses and goats. Price, \$16.00 per acre. Easy terms.

No. 63.—516 acres, natural Blue Grass land; well fenced; elegant well water. Good 5 room house, with all the necessary small farm houses in good repair. Good sheep barn 30x40. Thrifty young orchard of apples, peaches, pears and cherries. Land is all in grass, except about 40 acres, that is in corn and clover. Close to the city of Loudoun. 25 miles from railroad. This farm can be sold at from forty to fifty export cattle in September. It is located in a beautiful section of the county of Loudoun. 25 miles from Washington, D. C. Price, \$15.00 per acre, one-third cash.

No. 75.—Centerville, 25 acres, 15 miles from Centerville, in Loudoun county. Divided into three fields, land is smooth, all level and well improved; about 100 trees—apples, peaches and pears—in full bearing; good young dwelling, barn, 30x40, and other out-buildings—all in good repair. Located on good road; half mile to school, church and railroad. Price, \$500.

No. 76.—Large 100 acre mill new process all modern, very good buildings, 75 cost about \$14,000, situated in one of the finest grain sections of Northern Virginia, two and one-half miles from railroad. Ample water, fine ordinary passenger barn fitted up with a splendid boiler and engine to add power in the event of a drought. For sale to settle an estate. Write for full description. Price, \$75,000, or by easy terms.

Write for full information and price list of other farms.

W. E. MILLER, Herndon, Va.

THE BISHOP AND THE WAFFLES.

It would indeed be a queer bishop who could not tell a good story on himself. The late Bishop Dudley, of Kentucky, was wont to relate with much relish an interesting experience which he once had in connection with waffles.

At a fine old Virginia homestead where he was a frequent guest the waffles were always remarkably good.

One morning, as breakfast drew near an end, the tidy little linen-coated black boy who served at table approached Bishop Dudley and asked in a low voice—

"Bishop, won't y' have 'n'er waffle?"

"Yes, said the genial Bishop, 'I believe I will.'"

"'Dey ain' no mo'," then said the nice little black boy.

"Well," exclaimed the surprised reverend gentleman, "if there aren't any more waffles, what made you ask me if I wanted another one?"

"Bishop," explained the little black boy, "you's done et ten a'ready, an' I 'tought y' wouldn't want no mo'."—*Lippincott's*.

TO DRIVE AWAY SPARROWS.

A novel "scare-sparrow" which is claimed to be a success in keeping these birds from eating flower seeds might seemingly be extended to drive from other places which they infest.

Into a round potato stick twenty or thirty tail feathers of a chicken or turkey so that they will stand out from the potato on all sides. Hang it on a pole in the garden suspended by a string. As the wind sways it the sparrows evidently take it for a hawk and retreat.

Pieces of cloth tied to the branches of tree near which young chicks run will have a tendency to keep away hawks and crows.

The flocks of young turkeys are now at the age to demand constant attention, or it will be a case of "love's labor lost." Of course, every farmer and every farmer's wife is supposed to know how to raise turkeys; or, in fact, anything else that grows on a farm. Nevertheless, there are numberless dismal failures, and especially in the turkey department. Dampness and vermin are death to young turkeys.

After having gone to all the trouble of setting hens and turning out the flock of young ones, don't throw away the chance to make money by allowing vermin to sap their vitality or let them be exposed to heavy dews or cold rains. Either of these causes will kill fifty per cent. of the flock.

Young fowls will thrive much better on land where cattle, horses or sheep graze. Run a mower over these grass plots at least every two weeks during the summer.



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As low as \$5 per Acre

with improvements. Much land now being worked has paid a profit greater than the purchase price the first year. Long Summers, mild Winters. Best shipping facilities to great east-to markets at lowest rates. Best church, school and social advantages. For list of farms, excursion rates, and what others have accomplished, write to-day to

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AT LOW FIGURES

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Free list of 150 select properties. Describe your wants.

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OUR NEW LIST OF CHOICE BARGAINS IN FARMS, TOWN PROPERTIES, TIMBER LANDS, ETC. We can offer you great bargains in real estate situated in ROCKBRIDGE, BATH AND AUGUSTA COUNTIES. All information cheerfully and promptly answered. Livery, etc. free to those who mean business. J. W. GUINN, Goshen, Va.



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Good Lands, Low Prices, Mild Climate, ILLUSTRATED CATALOGUE. Largest list of Farms for sale in the State. Let us tell you WHY this is the country for the Northern farmer. We want to hear from every man who desires to better his condition.

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Where Health, Climate, Soil, Location and markets are unsurpassed. Any size, place and price to suit the buyer of stock truck, fruit, poultry or fish and oyster farm. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 36 P. pamphlet giving full particulars.

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56 acres of fine Timberland in North Carolina, for sawed lumber. **HALL & JEHNE**, Farmville, Va.

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for practical farmer to buy or lease and work on shares 280-acre farm, 125 acres under cultivation; some mile to depot; six miles to city (27000 people). Equipped with all farming implements, team, etc. House, barns, fences, and stables in fine repair. Good money can be made at dairying and raising hogs, chickens, early vegetables, and general farming. Would prefer to work on shares. Climate unequalled, school facility good. Market for products excellent. Labor scarce. Correspondence solicited. D. S. JONES, Box, 190, Newport News, Va.

••• VIRGINIA FARMS •••

Nice little poultry farm, 100 acres, good house and orchard, \$400.00. Blue Grass, Stock and Fruit Farms. Address PORTER & GATES, Louisville, Va.

A WOMAN ON CABBAGE GROWING.

(Bessie L. Putnam.)

Many think it too hard work; but if one is not annoyed by clubroot, the cabbage is one of the most satisfactory and easily grown of vegetables. The market is prolonged. If one has a surplus it can be disposed of advantageously.

Sow seed for early use in March, and place the seed-pan on the incubator or near the kitchen stove, where it will keep warm and the seeds will germinate quickly. For winter use, plant half a dozen seeds in each hill, and thin out all but the best ones when of size for transplanting.

Soil can scarcely be too rich. Use plenty of Virginia-Carolina fertilizer, even in a rich garden. A little poultry manure is also a good starter when put in the hill. This should be done just before putting in the seed, and will insure strong and vigorous plants. The secret of success is in keeping them growing so fast that the worms do not get a chance.

When the white cabbage-moth appears, keep the plants well dusted with good insect powder. Wood ashes may be substituted. Soap-suds is another good remedy.

Keep the soil well hoed about each plant, especially in dry weather. After mid-summer they will require very little work unless worms persist. If the heads incline to burst, partially loosen the root anchorage by tipping each head partly over.

If clubroot appears, burn every infested plant, and do not try to raise cabbage on the same ground again.

The Jersey Wakefield is hard to beat for early use.

ABSENT-MINDED.

"Dear me, Bridget, isn't it time you learned to set the table without help? I think that after I have trained you for a year I ought not to feel obliged to always look at the table before a meal is served."

"Sure, num. meould mother did be after shouldin' me for forgittin' whin I was back home in County Galway. 'Bridget, she'd be sayin', 'it's yerself do be sittin' there sewin', and here's the pig a-walkin' round the corner wid yer 'tumble in his mou'."—Lippincott's.

GIVE AND TAKE.

The other day the head of a boarding-school noticed one of the boys wiping his knife on the table-cloth, and pounced on him at once.

"Is that what you do at home? he asked indignantly.

"Oh, no," answered the boy quickly, "we have clean knives."—Lippincott's.

Some fine bred stock and poultry is offered by Mr. Jas. M. Hobbs. Consult his ad.

FINE FARMS in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address
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If you want to buy, sell, rent or exchange a farm or a suburban home, see
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FOR SALE Two fine improved farms in the best fruit and grain section of Virginia, one containing 95 acres, and the other 160 acres, both well located, will sell either one at a bargain. For particulars write **JAMES A. PAWLEY, South Boston, Va.**

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Eggs For Winter

Experience has proved that Water Glass is the most satisfactory material for preserving eggs. No change in the quality of the eggs at the end of a year. For Prices and other information write to J. B. WEEMS, Crewe, Va.

'FINE STOCK FOR SALE

1 extra fine black saddle horse 7 years old; very stylish and handsome; weight, about 1200 pounds; perfectly reliable in all harness. I don't believe there is a better horse in Virginia.

Splendid saddle gelding 8 years old; weight, about 1200 pounds; drives nicely; very gentle; rides well; perfectly reliable in all harness; few such on the market.

1 registered O. I. C. Bull, 12 months old; all grown, and a beautiful boy.

2 Berkshire sows 24 months old, with pig, by a registered O. I. C. pig. A fine lot of thoroughbred O. I. C. pigs, both sexes, at reasonable prices.

8 and 10-16 GRADE ANGUS BULL and Heifer Calves.

1 BULL CALF out of Shorthorn Cow, by Angus Bull.

Several fine family milk cows, fresh.

Several registered Angus bull and heifer calves.

6 beautiful pure bred Llewellyn Setter Pups for sale at \$5 each. None better at any price.

SILVER LACED WYANDOTTE eggs, 41 for 1.

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STOCK FOR SALE—

Reg. Holstein Friesian cows, heifers and bulls. Pure-bred Berkshire Bears, 5 years old. Reg. Dorset Sheep. Ewes dried also grade 5-6 bred to Reg. Dorset Ram. Gaited Saddle Horses. Bay gelding, 8 yrs. old, perfectly gentle. **J. H. FRASER, Cartersville, Va.**



SILVER WYANDOTTES
TO REDUCE MY STOCK
before cold weather I
am now offering SPEC-
IAL INDUCEMENTS
TO QUICK BUYERS
Write for descriptive
circular and prices on
what you want.

All birds strong and healthy.
Dr. H. H. LEE, R. F. D. 4, Lexington,
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ROSE and S. C. RHODE ISLAND REDS.

S. C. Brown and White Leg
horns, White Wyandottes, B. I.
Red Game and Barred Ply-
mouth Rocks. Choice stock
for sale. Eggs in season.
Write for prices, RIVERSIDE
POULTRY FARM, J. B. COFFMAN &
SONS, Prop'rs., R. F. D. 19, DAYTON, VA.



50 Barred and White Plymouth Rock

Cockerels for sale. AMER-
ICAN BEAUTY strain. Eggs
in season. Agent for CYPHERS
MODEL INCUBATOR and CONKEYS
ROUF CURE

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TO ADVERTISE STOCK

We offer the finest lot
of S. C. B. Leghorn Cock-
erels we have ever seen,
at \$1 up. Also a few
Barred P. Rock Cockerels
at bargain prices. All
line bred from first prize
winners at leading shows.

Strawberry Hill Poultry Yards,
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WHITE WYANDOTTES

Hatch of 1904; females \$1 each;
males from \$1 to \$2.50 each.

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A HANDSOME LOT

S. C. W. LEGHORN

Cockerels (Biltmore prize winning
strain), March, April and May hatch,
at 75 and 50 cents each. Good bar-
gains. Satisfaction guaranteed.
Mrs. F. E. WILLIAMS, Charlottesville,
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for sale. M. B. Turkeys, Barred Plymouth
Rock and White Wyandotte chickens, S. C.
B. Leghorn hens. All satisfied customers
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MISS CLARA L. SMITH, Prop'r.
Also Beggars Pups.

15 EGGS ONLY 75C.

From choice pure-bred S. C. BUFF ORP-
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Order direct from Ad. Satisfaction guaran-
teed. T. M. KING, Hagan, Va. R. F. D. No. 2.

GREEN FODDER FOR HOGS.

Dry Corn or Mill Feed Should Go
With It.

It is entirely practicable to use corn
fodder while the stalk and leaves are
still succulent. Of course, it makes
rather sappy food, but it may be made
to answer for the bulk of the ration. A
little dry corn or mill feed should be
used in connection with it.

We would advise using the fodder
until hogs begin to dry, after which it
will hardly pay to bother with the
stalks, it being better to feed the
snapped corn. When this is begun it
will certainly pay to feed some of the
concentrated foods such as tankage, oil
meal or mill stuffs.

Right here is where many persons
fall down in their efforts to raise and
fatten a good bunch of hogs. They do
not furnish material for the building
up of lean meat and bone, and conse-
quently their hogs fatten, but finish up
around 150 or 175 pounds, whereas
they should make a little more growth
and attain a weight in the same time
of 200 or 225 pounds.

While one is feeding snapped corn it
is very important that the hogs be sup-
plied with a mixture of charcoal and
salt. You will find that their appetite
will be very keen for substances of this
character, and this being true, it will
be highly profitable to feed it.

Watch them closely and see that they
are not bothered with worms, and if
they are, do not delay using a good
worm powder. It is an excellent idea
to use a coal tar product occasionally
in a slop. Ordinarily two or three
tablespoonfuls to a nail will be about
all that will be consumed. However,
when hogs reach the age of five or six
months it won't hurt them if it is made
even a little stronger than this. The
only question is, if you get it too strong
they will not eat it.

The best milk is about 87 per cent
water. If cows are allowed to suffer
from thirst they will surely fall off
in their milk yield. If allowed to
drink stagnant water the milk they
yield will be affected injuriously. The
cow's pasture, above all other pasture
fields, should be supplied with pure
water.

The first two cultivations of corn
should be deep. By that time the corn
roots will begin to reach out between
the rows and shallow cultivation is
better, as every root that is broken re-
duces the power of the plant by that
much to seek out the proper plant
food in the soil.

When the chickens and turkeys are
over a month old, feed less dough and
more whole or cracked grain. If oat
or wheat fields are in ranging distance
chickens, turkeys and guinea fowl will
practically make their own living, need-
ing only a handful of feed night and
morning to induce them to come home
to roost.

"Quality Counts"

—MY—

Barred Plymouth Rocks

this year prove that quality and scientific
breeding pays. Their points of excellence
are easily recognized. They satisfy cus-
tomers. Every bird is guaranteed to please,
or money refunded. Early hatched cock-
erels—for breeding or exhibition—big blue
barred, healthy, vigorous fellows ready for
delivery October 1st. Get your orders
booked early. No better stock in the South.
L. W. WALSH, Drawer 248, Lynchburg, Va.

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An extra choice lot of POLAND CHINA
PIGS, all recordable. They carry blood
of LOOK-ME-OVER and TECUMSEH. \$5
will get a choice pig. We offer one 2 year
old registered boar, "Big Sam," No. 60133.
The first \$20 gets this valuable animal. To
avoid inbreeding this low price is made. A
fine lot young SINGLE COMB BUFF OR-
PINGTON Cockerels, \$1.50 to \$3. Some
show birds in cocks at \$5 to \$10. A few
trios, 2 hens and 1 cockerel, for \$5 per
trio. Eggs, \$1 per 15, and for a limited
time we will prepay express to all Virginia
points. We take pleasure in replying to all
inquirers. OCCONEECHEE FARM, Jef-
ferson, Mecklenburg, Co., Va.

Bargain Sale

Extra fine cockerels of
Barred White and Buff P.
Rocks, Black Minorcas,
White, Brown and Buff
Leghorns in Rose and Single
Comb. Also 30 other
varieties. Price too low
to make public. Write
about it. Large Poultry
Book only 6c. JOHN E.
HEATWOLE, Box L, Harrisonburg, Va.



Glennie W. Orpingtons.

S. C. BUFFS exclusively. Pens headed
by birds from Wm. Cook & Sons. The
best of winter layers. Eggs this fall
\$1.00 per 13. Special this month; 15
Cockerels \$1.50 each.

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W. Plymouth Rocks

LARGE AND PURE WHITE.

BEST LAYING STRAINS.

Cockerels and Pullets or sale cheap;
also exhibition stock. BROWN LEGHORNS,
R. W. HAW, Centralia, Va.

SINGLE COMB

BROWN LEGHORN

Eggs for sale; 15 for 75c., 30 for \$1.25. Send
us your order and get a good stock of chickens.
We give satisfaction. Prompt shipment.

No stock for sale.
"The Manager of McHerrin Poultry Farm is
well known to me, and is thoroughly reli-
able."—S. B. Coggin, Agt. So. Ex. Co.
MEHERRIN POULTRY FARM, Branchville,
Va.

Mention THE SOUTHERN PLANTER in
writing.

SPECIAL BARGAINS

Having decided to close out all my

R. C. WHITE LEGHORNS.

I will offer them at very reasonable prices to move them quick. I have some M. B. Turkeys that are fine to sell. Also a few choice S. C. Buff Orpingtons.

T. M. KING, R. D., 2, Hagan, Va.

Silver Spangled Hamburgs.

8 hens, 1 cock for sale. 1st prize winners at Pittsburg last year. 164 eggs laid in August. \$25.00 if taken as a pen.

B. S. HORNE, Keswick, Va.

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Bright strain direct from Wm. Ellery Bright, 1905; S. C. White and Brown Leghorns; M. B. Turkeys and Berkshire Pigs, V. P. L. strain. Young stock and Eggs for sale at farmers' prices. **PINE HILL POULTRY YARDS, F. B. WATSON, Jr. Prop'r Chatham, Va.**

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SINGLE COMB BROWN LEGHORNS EXCLUSIVELY

Eggs for hatching now from new mating. Best laying strain, \$1 for 15; \$6 per 100. No stock for sale. **CAL HUSSELMAN, R. F. D. 6, Richmond, Va.**

PURE-BRED**S. C. W. LEGHORN**

Cockerels from Wyckoff Strain of celebrated layers, pure and unmixed, \$1 each. **COTTON VALLEY FARM, Tarboro, N. C.**

EGGS FOR HATCHING.

\$1 for 15. Black Minorcas, Black Langshans, Barred and White Rocks, Light Brahmas, S. L. Wyandottes, S. C. W. Leghorns, S. M. S. R. C. B. Leghorns. A few more S. L. Wyandotte cockerels for sale, \$1 each. **J. B. JOHNSON, Clover Hill Farm, Manassas, Va.**

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from Hens 22 to 24 lbs. and Tom 36 lbs. for sale. **BARRED PLYMOUTH ROCK** chickens, very fine.

MRS. W. F. JACKSON, Olga, Amelia Co., Va.

BUFF WYANDOTTE

Cockerels, Dr. Sanford strain, and 5 **IMPERIAL PEKIN DUCKS**, Rankin strain, for sale.

MISS C. J. TAYLOR, R. F. D., 3, Charlottesville, Va.

COCKERELS for sale

100 S. C. BROWN LEGHORNS,
20 B. PLYMOUTH ROCKS,
10 S. C. WHITE LEGHORNS.

Order early if you want some nice pure bred cockerels. **TOPLAND POULTRY FARM, Blacksburg, Va.**

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In various parts of Europe the custom of growing fruit trees by the roadside has proved not only a source of gratification to the passerby, but of wealth to the land owner. France alone now has trees yielding from this source nearly \$60,000,000 per annum. Belgium, Wurttemberg, and other countries have also a rich showing.

What has been done with fruit can also be accomplished with other trees. There is no more beautiful shade tree than our hard maple. Yet Vermont, New York and Ohio have almost a monopoly of the maple sugar industry. Fifty or a hundred trees on a farm would not only furnish the table with one of the most delicious of sweets, but yield a handsome surplus. Sugar-making comes when little else is rushing on the farm, and there is always good demand for the pure article.

The basswood is another rapid-growing and beautiful tree for the roadside, its creamy blossom furnishing an abundance of nectar from which the bees secure amber honey of superior flavor. The timber finds ready sale at good prices. The same may be said of the tulip tree, which is one of our most handsome as well as useful forest trees.

Then there are the nut trees, some of which come to bearing size in comparatively few years and add to our wealth both in fruit and timber. Black walnut is well growing for the timber, and the nuts are just that much extra.

We have all admired the well-shaded highway; yet it may be likewise regarded as a source of wealth. And the potato patch which sometimes serves to clean out the neglected fence-row is no more a money-maker than may be the refreshing shade tree. Study the nature of the soil, and your own local needs; useen plant for shade and money, be it fruit tree, maple, or catalpa.

WHAT OTHERS ARE DOING.

Top grafting has been found an economical method of utilizing surplus nursery stock, which sometimes accumulates in such quantity as to be bought very cheap. Select three to six of the strongest and best arranged limbs and prune back to stubs two or three inches long. All other branches are removed, grafts wound with waxed cord and painted over with liquid grafting wax, covering with it all cut surfaces. The roots are pruned back to three or four inches just before the grafting is done, and trees set out as soon as grafted. This method is especially in favor where the desired varieties cannot be obtained or are weak growers with tender trunks.

He who makes no mistakes makes no progress.

Lynnwood Stock Farm

has maintained its supremacy in the prize ring as usual as attested by the Horse Show record in the draft classes, as the Percherons winners, 16 in all, with two exceptions, were products of the Lynnwood Stock Farm.

VERY LOW PRICES WILL BE GIVEN ON SHORTHORNS, BERKSHIRE HOGS, AND PERCHERON HORSES.

Come and see the stock it pays to breed and feed **JOHN F. LEWIS, Lynnwood, Va. "Lewis" Station, N. & W. R. R.**

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BURT, foaled 1901. Bay colt, by Auras Cara Bill, by imp. Charaxus.

FLORENCE GLENN, foaled 1898. Chestnut mare, by Linsey Woolsey—Thelma by imp. Esther.

AGNES GRAY, foaled 1901. By Jim Gray, St. Olga, by imp. St. Blaise; 2d dam Olitipa, by imp. Leamington; 3d dam, by Lexington; 4th dam by imp. Glenoe, etc. Agnes Gray now has a filly foaled by imp. Potentate.

Hannah C., foaled 1902. Bay filly by Auras Kathleen Gray, by Jim Gray; 2d dam, Katie C. by imp. Charaxus. I also have others from one to two years old by imp. Waterlevel and imp. Potentate. Some of them have been trained or raced. **S. H. WILSON, Byrdville, Va.**

FOR SALE.—SPRING,

Son of Kelly; dam, high bred saddle horse. Plymouth chickens: Hogs, Pigs, Heifers, Va., grey winter oats, Hickory king corn, Wheat.

D. WASHINGTON, "Spring Hill," Woodford, Va.

LOUHOFF'S

White Wyandottes, White & Brown Leghorns, Barred Plymouth Rocks.

A lot of choice cockerels and Brown Leghorn pullets and hens at 75 cents each.

PIEDMONT HEIGHTS FARM, Yancey Mills, Va.

OAKMONT FARM.

S. C. BROWN LEGHORNS.

BRED IN LINE SINCE 1880.

5 Cocks from my 1907 breeding yards, and a nice lot of **COCKERELS** for sale at reasonable prices. Can also spare a few more hens. **G. W. OSTERHOUT R. F. D., 1, Bedford City, Va.**

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

RARE BARGAIN IN HEREFORDS

IF TAKEN AT ONCE, GOOD REASONS FOR SELLING.

BELLE DONALD 47th, calved June 22, 1904; sire Beau Donald 34th, dam Belle Donald 40th.
 ACTRESS, calved August 10, 1903; Sire Van 102nd, dam Actress 7th, 1904.
 LADY OF INGLEBIDE, calved March 2, 1904; sire Verne 120th, dam Gladys 9702.
 PRINCESS DONALD, calved Aug. 20, 1904; sire Beau Donald 56th, dam Princess R. 10th.
 IONE 19028, calved Oct. 25, 1901; sire Mar-maduke 9603, dam Iona 9675.
 AUTREBES 4TH, calved Aug. 1, 1900; sire Actor 33 5823, dam Iona 9642.
 PANSY 9072, calved March 20, 1899; sire Montclair 7107, dam Peerless 3831.
 PRINCESS R. 6TH 11271, calved Jan. 2, 1902; sire Prince Rupert 7939, dam Lily Princess 2079.
 PRINCESS R. 12TH 12474, calved Jan. 5, 1902; sire Prince Rupert 7939, dam Lily P. 2d of P. 6467.
 PRINCESS R. 7TH 13049, calved March 11, 1901; sire Prince Rupert 7939, dam Florence 2d 6903.

All of breeding age have been served to Rex Premier 14552, whose show record as a calf is first at Missouri State Fair, first Hamline, Minn., and first at Kansas City, Royal.

The above are all choice individuals. Every animal guaranteed. They represent the very best Hereford blood that this will not be considered in pricing them for prompt acceptance. Address

ELKTON STOCK FARM, FOREST DEPOT, VA.

Hereford Bulls

Registered young stock for sale. HIGH GRADE HEREFORDS of both sexes; also, WANTED, some high grade SOUTHDOWNS, EWES, WM. C. STUBBS, Valley Front Farm, Sassafras, Gloucester county, Va.

THE SPRINGWOOD SHORTHORNS

Herd headed by ROYAL CHIEF, 18482, he by ROYAL STAMP, the champion Bull of this last year. I now offer for the first time some extra nice red and roan heifer calves, 6 to 12 months old; a special offering; one 2 year old bull and some younger ones. W. T. THRASHER, Springwood, Va.

ELLERSLIE FARM:-:-

Thoroughbred Horses

AND

Shorthorn Cattle, Pure Southdown Sheep and Berkshire Pigs.

For SALE, R. J. HANCOCK & SON,
Charlottesville, Va.

Shorthorn Bull Calves.

Three 5 months old Shorthorn Bull Calves for sale, 15-16 thoroughbred, Red with white points. Bred from milk and beef strains. Just weaned. Weight 400 lbs. Price \$30.00 crated.

F. M. MAGRUDER,

Eastham, Albemarle Co., Va.

—TWO—

DEVON BULLS

19 months old, eligible to register, for sale. BREEDING, COLOR and STYLE. \$75 buys the pair.

R. J. FARRER, Orange, Va.

MOLASSES FOR STOCK.

During the past two or three years considerable attention has been given to the feeding of molasses to stock. Experiments conducted in several parts of the United States show that this feed is of value in making gains with hogs, cattle and horses. In feeding molasses to stock it is usually mixed with some material that makes the handling of it easy. Cane sugar molasses for feeding purposes is mixed with cut hay, rye, straw, cotton seed meal, cotton seed hulls, corn meal, etc., beet sugar molasses with bran, dried blood, extracted beet pulp, cut fodder such as clover, alfalfa and shredded fodder and corn meal. Many of the stock feeders in the corn belt districts during the last season, have obtained good results from feeding beet sugar molasses. The feeding value of the molasses lies chiefly in the per cent of sugar it contains. In mixing with foods, a material that is high in protein is best used.

MEXICAN EARLY CORN.

There is a variety of Mexican corn that will make two crops in the South. It is small, but very sweet, and matures quickly. The best time for planting the first crop is May and the second in June. The ground should be as fine as a garden, and well manured with Virginia-Carolina fertilizer. It will yield big crops, and is the very thing for roasting ears. If it does not mature before frost—which is not likely—it is excellent feed for stock. It is as good as the common dent corn. The grain is of many colors, and some people object to that, but its sweetness more than offsets the color.

IN THE SHEEP FOLDS.

Rane when once grown by the sheepman is continued as a crop on his farm. Machine sheep shearing has come into universal practice. The rapidity with which the shearing is done coupled with the humane method of removing the fleece without injury to the animals by cutting has put the sheep shears out of use.

Wet natures and soft manure give the sheep foot rot. Prevent this trouble by giving the sheep dry footing.

Where ewes lack a full flow of milk for their young, they should be placed in a quiet place and fed on those feeds that are the most likely to produce milk.

The farmer who has a hilly farm will find profit in sheep. Sheep farming can be made as profitable as any branch of live stock on the farm. The amount of land required to keep one cow will keep eight sheep.

As soon as the lamb is dropped get it up and see that it gets some milk. Quite often the ewe's milk starts hard. If this occurs bathe the udder with hot water and at the same time rub with the hand.

Angus Cattle.

For sale at attractive prices.

A FEW NICE HEIFERS, 1 YEARLING BULL, 1 EIGHT MONTHS OLD BULL and some fine BULL CALVES, all the get of our registered Bull, MARVEL (grandson of the great bull Gay Blackbird), and out of pure-bred cows.

Address

WILSON BROS. & CO.,
News Ferry, Va.

BARGAINS

FOR QUICK BUYERS

Angus Bull Calf

out of Shorthorn Cow.

3 pure bred **BERKSHIRE PIGS** 7 months old, unregistered. Price \$15 each. 100 Rhode Island Red Cockerels and Pullets; 4 Pullets and 1 Cockerel for \$5. Single Cockerel, \$1.50. Send check or money order.

C. A. WILLIAMS, RINGWOOD, HALIFAX CO., N. C.

ROSE DALE HERD....

Aberdeen Angus

Top notch young registered Bulls and speciality. A few heifers to offer with bull not skin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS Jefferson, Va.

MONTABELLO HERD

Aberdeen Angus Cattle.

FOR SALE—Registered Bull Calves from 3 months old up.

L. H. GRAY, Orange, Va.

TWO PURE-BRED

Aberdeen Angus

cows for sale; in calf second time to our pure bred Angus Bull, "Harmon" Apply to J. B. IRBY, Irby, Va.

TWO REGISTERED

Aberdeen Angus

Bulls, ages 6 and 12 months, for sale. For particulars address E. T. TAYLOR, Manager Thomas Nelson Page's Mount Air Farm, Bandana, Va.

—FOR—

Shorthorn and Angus Cattle

Poland China Hogs, Fox Hounds, B. P. Rocks and S. B. C. Leghorns, write J. D. STODGHILL, Shelbyville, Ky.

Always mention the Southern Planter when writing advertisers.

MORVEN PARK.

The Property of WESTMOELAND DAVIS, Esq.

Large White Yorkshires.

LARGE WHITE YORKSHIRE PIGS from prize winning families for sale. Herd headed by imported boar, "Holywell Huddersfield" No. 4850 (A. Y. C.), second prize at Yorkshire Show, England 1904. These pigs are the English Bacon breed: they are prolific breeders, economical feeders, and hardy of constitution. During the month of August the two farrowing sows, imported Sweetest Polly (A. Y. C.), gave birth to 17 pigs, and the sow imported Holywell Empress (A. Y. C.), gave birth to 14 pigs. Orders will now be received for boars and sows from these and similar litters. Also a few boars fit to head any herd at reasonable prize.

Reg. Guernsey Cattle.

REGISTERED GUERNESEYS—Herd headed by imported Top Notch, 9023 (A. G. C. C.), a son of Imported Itchen Beda advanced Reg. No. 136, assisted by Mainstays Glenwood Boy, 7607, A. G. C. C. (son of Jewell of Haddon), advanced Reg. No. 92. This herd is rich in the blood of Mainstay, Rutila's Daughter, Imported Honoria (Guernsey Champion, first prize at St. Louis), the Glenwood, Imported May Rose and Imported Masher families. Bulls only for sale. No cows for sale.

Dorset Horn Sheep.

DORSET HORN SHEEP.—Flock headed by the Imported Ram, "Morven's Best," No. 4132 (C. D. C.); first prize at the English Royal 1904. A few ram lambs for sale.

Flocks and herds may be viewed by appointment.

Address

LIVE STOCK DEPARTMENT, MORVEN PARK,
LEESBURG, LOUDOUN CO., VA.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

**JERSEY BULLS
And HEIFERS.**

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls, 1 to 6 months old, \$25. Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

Fine Jersey Bull

For sale, reg. A. J. C. C., 3 years' old; kind and gentle; no fault; for price and particulars address MONTEBROOK, Box 213, Keysville, Va.

HIGHLY BRED**JERSEY COWS**

fresh to the pail, for sale; also REG. JERSEY BULL 6 months old, from high testing stock. S. C. BROWN LEHORNS, at farmers' prices. EVERGREEN FARMS, W. B. GATES, Prop., Rice, Va.

Jersey Bull

For sale. Calved, Sept. 5th 1901; sire BILLY POGRE, 51918; dam, FLYING MIDGET, 81769. He is an extra good sire and a fine, large individual. Address

H. & B. R. MORSE,

R. F. D., 3, Blackstone, Va.

JERSEY COW

WANTED. Must be in calf to pure-bred Jersey Bull and to calve next spring.

R. C. BRISTOW, Ballsville, Va.

Registered DEVON

cows and heifers and heifer calves for sale at farmers' prices.

W. E. THOMAS, Nassawadox, Va.

DEVON HERD. HAMSHIREDOWN FLOCK. ESTABLISHED 1884. ESTABLISHED 1880.

DEVON CATTLE

**BULLS and HEIFERS,
Hampshire Down Sheep,
RAMS and EWES.**

ROBT. J. FARRER, Orange, Va.

EDGEWOOD STOCK FARM.

Red Bull calves, choice breeding 3 to 10 mos. How about a calf combining Rufus and Majoliini as a herd leader? Try a Red Poll for dehorning your Shorthorns and giving you all red in color.

H. B. ARBUCKLE, Maxwelton, W. Va.

BEST HOG ON EARTH

CHESTER WHITES at farmers' prices. S. M. WISECARVER, Rustburg, Va.

SMALL HINTS ON FARM WORK.

Provide plenty of wood ashes and salt for your pigs.

He who feeds his land well will be fed.

"Beauty is as beauty does," applies to home surroundings as well as people.

Limbs that are diseased on trees, are best removed as soon as discovered, regardless of the season or age of the trees.

Every drop of liquid manure saved on the farm is worth an ear of corn.

If concentrated food is purchased to help out, the skimmed milk fed to hogs or pigs will pay for the purchase of such feeds.

When you hear the farmer say "Just my luck," in nine cases out of ten if he were truthful he would exclaim "just my laziness," or "just my inattention."

To find the number of cords there are in a pile of wood multiply the length by the width and height and divide by 128.

The first year of the colt's life is important. Keep him growing the first year, keep him growing the second year, keep him growing the third year and keep him growing the fourth year, and if he is to be marketed have him fat, for fat will often cover up a multitude of defects.

If properly managed an acre will supply through the silo ample feed for a cow for one year.

Abundant food within easy reach is what plants require in order to make their best growth.

It is up to the farmer to see that the physical as well as the chemical condition of the soil supplies the needed plant food. Cultivation, rotation and Virginia-Carolina fertilizer will meet this need.

WILL NOT MIX.

An old fashioned way of fixing fertilizer for the corn field was to mix hen manure and ashes and drop it on the hills. That was before we knew that hen manure and ashes are natural enemies to one another. Put together they will war with each other till not even the fabled Kilkenny cat-tails are left.

Uncle Sam's weather bureau man feels that weather forecasts based on planetary influences, erroneous as they are, have gained such a footing among the rural public as to be harmful, money being too freely expended for this guess-work. Long since weather forecasts have not yet attained reliability.

Incidentally, short ranges ones have grown to be "jokes" in flooded districts this year.

The Davis Cream Separator Co. would like to furnish interested parties with catalogues, etc. of their machines. Look up the ad.

RED POLLS.

On account of pressure of other business, I shall discontinue farming, and will sell my herd of grade RED POLLED cattle; also registered bull, very fine. The grades are $\frac{3}{4}$ to $\frac{7}{8}$ th. Address,

J. T. DENNY, Red Springs, R. F. D., 4, N. C.

THOROUGHbred

Berkshire Boars,

Jersey Bull Calves,

Dorset Buck Lambs.

All stock in best of condition and guaranteed as represented.

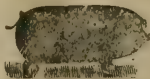
F. T. ENGLISH, Centerville, Md.

70 Grade Ewes

bred to Shropshire and Long

Wool Bucks; also 6 Fine Mules 5 years old; 2 Tornado Ensilage and Feed Cutters, one No. 12 and the other larger, in good running order. Having sold my two farms, will sell the above at right prices.

JOHN MATHEWS, 3008 E Broad St., Richmond, Va.



**Essex Pigs and
SOUTHDOWN LAMBS.**

Some fine Essex Pigs. March farrow; also July pigs for September delivery. Choice Southdown Lambs. Your orders solicited.

L. G. JONES,
R. F. D. No. 1, Tobaccoville, N. C.

Dorsets

Woodlawn Farm has a few of the best rams it has ever off red. Wool is an item worth considering this year, and our rams are exceptionally heavy shearers, besides having excellent mouth forms. J. E. WING & BROS. Mechanicsburg, O.

KENTUCKY JACKS

Kentucky Registered mammoth jacks and jennets, also Spanish bred jacks. Some nice Saddle Stallions and Poland China Hogs.

J. F. COOK & CO.,
Lexington, Ky.

**EVERY FINE****VIRGINIA BRED JACK**

3 years old 10th of last June. First season out and more than paid for himself. Sound, gentle and a perfect beauty. Price, \$50, half cash and 12 months' note for balance. With interest at 4 per cent. License paid to May 1, 1900. J. E. THOMASSON, Bumpass, Va.

Jacks, Jennets and Mules.

A fine lot of Kentucky bred and big black Spanish jacks and jennets. Also mules, Match teams, one to six years old. Write or see me before you buy. Come to Kentucky if you want a good jack.

KENTUCKY JACK

FAIRM, JOE E. WRIGHT, Junction City, Ky.

STOCK OWNERS USE



Foutz's

HORSE AND CATTLE

Powder

The oldest, best known, most reliable, and extensively used of all Condition Powders. It cures Chronic Cough, Heaves, Influenza, Dis-temper, Hide Bound, Indigestion, Constipation, and all Stomach Troubles. Restores lost appetite, and increases the assimilation. It assists in fattening and increases the quantity of milk and cream. Guaranteed to give satisfaction. Sold by Druggists, General Merchandise, and Feed dealers, or sent charges prepaid at the following rates:

1 Package, 25c; 5 Packages, \$1.00;
12 Packages, \$2.00.

Beware of Imitations and remember that each package of the genuine is covered with a pink wrapper. Send for descriptive literature.

THE DAVID E. FOUTZ COMPANY,
Baltimore, Md.,

Lump Jaw

Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use

Fleming's Lump Jaw Cure
No trouble—no bit on. No risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free book tells you more.

Spavin and Ring-bone

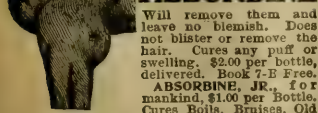
Once hard to cure—easy now. A 45-minute treatment does it. No other method so easy—no other method sure.

Fleming's Spavin and Ringbone Paste cures even the worst cases—none too old or bad. Money back if it ever fails. Free illustrated book about Lump Jaw, Spavin, Ringbone, Splint, Bog Spavin and other stock ailments. Write for it.

FLEMING BROS., Chemists,
280 Union Stock Yards, Chicago, Ill.

SHOE BOILS

Are hard to cure, yet



Sores, Swellings, Etc. Manufactured only by

W. F. YOUNG, P. D. F.
109 Monmouth St., Springfield, Mass.

THE LUSCIOUS WATERMELON.

The watermelon plant must have plenty of light. It thrives best in a light, sandy, rich soil, upon a porous subsoil. It should be well exposed to the sun all day long. After the weather has become settled, the field is plowed deeply, harrowed thoroughly and marked in checks 8 to 10 feet apart. Hills are usually made by drawing up some earth over a handful of Virginia-Carolina complete fertilizer, well mixed with the soil. For special purposes however, they are often dug out to a depth of six or more inches, filled with manure and raised above the surface. From eight to a dozen seeds are planted 2 or 3 inches apart in each hill. All but two or sometimes three of the best plants are pulled up before they commence to crowd. This pulling is usually done at two different times, the poorest being removed at the first pulling. The two or three plants left will give far larger, better flavored melons than a greater number of plants in the same space.

From the first the ground must be kept clean by frequent cultivation. Once each ten days and after every rain that forms a crust is the rule. Only the surface need be kept loose. Weeds must not grow in the hills.

When the vines begin to run or there is danger of breaking or even moving them when cultivating, the crop must be laid by and crimson clover, cow peas or other cover crop sown thinly among the vines, as well as between the hills. Some growers pinch the tips of the shoots; others dislike the practice. The object sought is to hasten maturity of fruits.

Professor T. C. Johnson of the West Virginia Experiment Station has discovered that soda-bordeaux mixture will check the disease of anthracnose. Write to the Director of the experiment station of your State for instructions as to the method of making and using this mixture and the time. The last is important as it is necessary to apply it at the right time and the varying conditions of climate and season should be considered.

CAUSE OF COLIC.

One of the fruitful causes of colic in horses is to let them partake copiously of water immediately finishing a feed of oats. There is no surer way of generating an attack of colic than this. The reason is plain that the water has a tendency to carry with it out of the stomach and into the intestines some of the undigested oats. The grain being raw and undigested, its effect is to give rise to irritation and inflammation, the immediate cause of colic.

Mention THE SOUTHERN PLANTER in writing.

Warranted to Give Satisfaction.

Gombault's

Gaustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for
Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind, Pulls, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Gaustic Balsam sold is Warranted to give Satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. For descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.



NEWTON'S Heave, Cough, Dis-temper and Indigestion Cure. A reliable specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per box, of dealer, or Exp. prepaid. The Newton Remedy Co., Toledo, Ohio.

NO MORE BLIND HORSES.

For Specific Ophthalmia, Moon Blindness and other sore eyes, Barry Co., Iowa City, Ia., have a sure cure.

Homer Pigeons,

Bred of choicest selected stock from Plymouth Rock Squab Co., \$1 per pair.

C. DE BRUYN KOPS, Wake, Va.

Poland China Pigs

Some fine ones, young sows bred, young hogs and pigs. No better breeding in the United States. My herd hogs have been sired by J. H. Sanders, Lookmoover. Perfect J. Know, Proud Perfection, Corroter and High Roller, the greatest prize winners of the breed—my sows have been as carefully selected.

RED POLLED CATTLE. Fine good young bulls. Will sell a few cows and heifers. ARROWHEAD STOCK FARM, Charlottesville, Va., SAM'L B. WOODS, Prop.

Registered P. Berkshire

C. Whites. Large strain All sires mated not skin, 8 week pigs. Bred sows, Service boars, Guernsey calves, Scotch Collie pups and poultry. Write for prices and free circulars. P. F. HAMILTON, Cochranville, Chester Co., Pa.





Pure Bred Southdown and Shropshire Sheep; Poland China, Chester White and Berkshire Hogs.

All stock eligible to registry and fully pedigreed. I can offer for prompt acceptance some Extra good Buck Lambs, Yearling Bucks and bred Ewes of both breeds from Imported Prize Winners, Choice Service Boars, and Bred Sows of all three breeds from the best strains obtainable. Pigs 2-3-4-5 months old singly, in pairs, and trios mated for breeding not akin.

SPECIAL CONCENTRATED SWINE POWDER. It makes three times its weight of the best Swine Conditioner ever offered the public. It prevents and cures all Swine diseases. For breeding stock feed one tablespoonful three times a week. Price 6-lb package \$1.25, 25-lbs \$5.00 freight prepaid. For quick buyers who want Prize Winning Stock, I can offer Cocks, Cockerals, Yearling Hens and Pullets of the following breeds, **BARRED, WHITE and BUFF PLYMOUTH ROCKS, WHITE and LACED WYANDOTTES, WHITE and BROWN LEG-HORNS, R. I. REDS, BLACK MINORCAS and BUFF ORPINGTON CHICKENS.** A bargain in **PEKIN and ROUEN DUCKS, BRONZE and WHITE HOLLAND TURKEYS.** Stock and Birds for sale at all times. Now is the time to order as prices will soon advance.

Satisfaction guaranteed, and references furnished. Send orders at once, write today; I can make you money. Address, **JAMES M. HOBBS, 1521 Mount Royal Avenue, Baltimore, Md.**

3-PURE - BRED-3 BERKSHIRE BOARS

by PRINCE HAZAR, out of GOLD-
EN STARLIGHT, 5 mos. old.
Choice individuals. \$10 each.

H. B. ROBERTS, Abingdon, Va

GLENBURN

BERKSHIRES.



In this herd are twelve royally bred IMPORTED animals. Also selected American bred stock. Our IMPORTED boars Hightide Royal Victor and Loyal Hunter won first at Eng. Royal and Va. State Fairs, respectively. A splendid lot of pigs of gilt edged breeding now ready for shipment. Dr. J. D. KIRK, Roanoke, Va.

SOME NICE

BERKSHIRES.

for sale. 1 Reg. boar, one and one-half years old, 2 Reg. Sows, 2 years old, and 2 young sows eligible to registry. Will sell the lot or singly at very reasonable prices. J. A. TURPIN, Hallsboro, Va.

BERKSHIRE BOARS.

I offer some exceedingly choice young boars for sale; by Imported Danesfield Tailor, 76490 and out of Biltmore bred sows. It will be hard to find better or cheaper stock

HENRY WARDEN, Fredericksburg, Va

WALNUT GROVE FARM,

SHAWSVILLE VA.

Orders now taken for pure-bred

BERKSHIRE PIGS.

to be delivered after December 1st. None but the best will be shipped, others go to the pen. One two year old Hereford Bull, registered, for sale, a perfectly formed Animal, and as well bred as America's best, address all communications to W. J. CRAIG, Mgr., Shawsville, Va.

DR. MOORE NOT A GRAFTER.

Might Have Become Rich Had He Kept His Secret.

To the Editor:—

The friends of Dr. Geo. T. Moore, the algologist and physiologist of the Department of Agriculture, who resigned last week, do not believe that he could intentionally ever become mixed up in any sort of graft. Dr. Moore is a scientist and no business man. He has no use for money except for the purpose of investigation and his life is bounded by the walls

He might easily be worth a million dollars to-day if he had been a grafter. His discoveries in connection with nitro-culture alone could have been sold by him, to private companies in this country and Europe for sume far beyond the dreams of the average scientist and large enough to satisfy even the most enterprising grafter. Had Dr. Moore been dishonest, it would have been an easy matter for him to have kept the secret of his discoveries to himself, quietly resigned his position in the government service and later made use of his secret for his own personal gain. He did not do this, but on the contrary urged the department to take out letters patent on his discoveries for the express purpose of preventing them from being monopolized by private companies. By this means any manufacturer in this country can obtain the formula and all the secrets of manufacture known to Dr. Moore and he can never become a monopolist. In conversation with Dr. Moore last winter, he strongly expressed to me a desire that nitro-culture should be manufactured by as many different persons as possible in order that it could be placed in the hands of farmers quickly and at a low price. He expressed a desire to give to any manufacturer who wanted to engage in the business his formulas and methods of manufacture.

Berkshire Pigs.

Hawksley Stock Farm has them of the best breeding; fine individuals. J. T. OLIVER, Prop., Allen's Level Va.

TWO REGISTERED

BERKSHIRES.

SIR CHARLES 76625 and FANNY LEE 76622. Both fine, well grown animals. Also 2 registered DORSET RAMS.

PERE WILMER & SONS, Faulkner, Md.

SALT POND HERD

Duroc Jerseys

PAUL J., 21635, heads the herd with such sows as LULIE'S PET 40434, BELLE OF SALT POND 70464, and LADY OF VIRGINIA, 70456, Young stock for sale. S. A. WHITTAKER, Hopeside, Va.

Duroc Jersey Pigs.

Fine Registered Stock for sale; fall delivery.

ORPINGTON and WHITE ROCK

Eggs from the best strains that money can buy; Pekin Ducks; also 10 Bee Hives for sale. W. M. CARROLL, Box 106, Lynchburg, Va.

POLAND-CHINAS.

with the BUSINESS HAMS.

Large mellow, easy keepers Bred right and sure to please. SUNSHINE, U. S. PERFECTION and TUCUMBEH blood. A few Spring Pigs of both sexes eligible to registry, for sale.

A GRAMAM & SONS, Overton, Albemarle county, Va.



ORCHARD HILL

PURE
BRED

POLAND CHINAS.

8 fine young Pigs ready for service; 5 beautiful sows ready to breed; Several litters of choice pigs. Also an 8 months old Guernsey Bull whose dam tested 426 lbs. butter in one year.

F. M. SMITH, Jr.

R. F. D., 4, Charlottesville, Va.

Mention the SOUTHERN PLANTER in writing.

It is a well known fact that he has supplied cultures and given instructions without favor to every individual and company that has applied to the department and has in every possible way encouraged the manufacture of nitro-culture. These facts discredit the charge that he was attempting to profit by a connection with the National Nitro-Culture Company of West Chester, Pa. The truth is he never made a dollar out of that company. He refused a salary of \$5,000 and the possibilities of large profits because he preferred to stay with the department and work out his theories although the government paid him only \$3,000, a sum that would hardly interest the average official grafter.

Dr. Moore's discovery of the use of copper-sulphate for the purification of reservoirs and other drinking water supplies, is of vastly greater importance, financially, than nitro-culture. If he had been a grafter, he might easily have disposed of this discovery for large sums, besides securing for himself a position at a salary which would make his government pay look like 30 cents. Instead of doing this, he gave the widest publicity to his discoveries, and they are now free to be used by everybody. Certainly these facts ought to outweigh the charges that have been preferred against him by jealous persons.

The opposition to Dr. Moore is largely caused by professional jealousy and business interests. Some scientists connected with the agricultural colleges throughout the country, have tried to manufacture nitro-culture without success, although they had obtained the formula from Dr. Moore. Naturally they are disappointed at not being able to pose before the farmers of their states as successful investigators and have lost no opportunity to discredit Dr. Moore's discoveries. Then there are a lot of people, some of whom are connected with agricultural papers, who are engaged in selling inoculated soil to farmers trying to grow legumes and naturally they are "agin the gov'm't" and everybody else who has something better. It is possible that if Secretary Wilson will beat up the brush a little he will find that the African in the wood-pile is closely related to these gentlemen.

Whatever may be the result of the investigation of the charges against Dr. Moore, the value of his discoveries will in no way be affected and the farmers of this country will not suffer by it. On the contrary, should the National Nitro-Culture Company employ him, which they could afford to do at three times greater salary

REGISTERED

DUROC and O. I. C.

Pigs at farmers' prices. No runs or scrub pigs sent out. Satisfaction guaranteed or money refunded. J. E. THOMASSON, Bumpass, Va.

30 DAY TRIAL OFFER

Any reader of this paper who will remit direct to me for a can or half-can of my remedy at below prices, and will give same a fair trial for 30 days, may have his money returned if at the end of that time he is not satisfied that his hogs have been benefited, that the remedy will do all that is claimed for it, and that it is the best hog remedy he has ever used.

DR. HAAS' HOG REMEDY

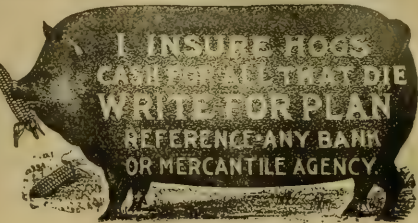
is purely a Medicine and not a "Food"

THE OLDEST

AND BEST

and has a successful record of nearly 30 years, and is the biggest money-maker for hog-raisers known.

It will Prevent and Arrest Disease, Stop Cough, Expel Worms, Increase Flesh, Hasten Maturity, and pay for itself many times over in Feed Saved.



TRADE MARK

PRICES.

Twenty-five pound can, \$12.50; half-can (12½ pounds), \$6.50, prepaid. Packages, \$2.50, \$1.25, and 50 cents each.

None genuine without my signature on package or can label.

HOG BOOK FREE

Latest Revised

Edition "HOG LOGY."

My book about Hogs will be sent free if you mention the Southern Planter when writing for it. Many new and important subjects have been added, and some of those treated are: The Hog a Money Maker, Statistics, History, Illustrations and Description of Breeds, Associations, with address of Secretaries, Advice on selecting Location, Breed, Brood Sows, Boars, etc., Pedigrees, Quarters, Foods, Inbreeding, Marketing, Curing Pork, Fall Pigs, Exhibiting, Anatomy of the Hog, Illustrated; Diseases—more than fifty of the ailments to which the hog is subject plainly diagnosed, with cause, symptoms, and treatment, etc., etc.

Dr. HAAS' LIVE STOCK REMEDY For Horses, Cattle and Sheep. Carefully prepared under the personal direction of Dr. Jos. Haas, V. S., who has had over 30 years experience in the treatment of live stock. Endorsed by the most successful breeders and feeders in the country. Highly Concentrated, and quickens the fattening process. Has no equal and saves its cost in feed.

PRICES—Packages, \$1.50 and 25 cents each.

20TH CENTURY POULTRY FOOD—the greatest egg producer on the market—keeps fowls healthy, prevents cholera, roup and all poultry diseases. Best food on earth for poultry. Try it.

PRICES—25-lb. bags, \$3.50; packages, 25 cents each.

JOS. HAAS, V. S., Indianapolis, Ind.

Baron Premier 3rd 75021,

the head of our herd, was first in his class at World's Fair; weighs 900 pounds at 22 months. His dam is litter-mate to Lord Premier, 50001, selling recently for \$1,500; his sire was premier champion winner at World's Fair at St. Louis. With this great hog and a large line of both Imported and American well selected sows and gilts, especially chosen to mate with him, we are actually producing and accomplishing the pleasure of breeding the most magnificent strains of BIG, LONG, WIDE, DEEP THICK-SET BERKSHIRE HOGS on short legs.

We are now offering a few bred sows and gilts and some three months

pigs. It makes no difference how fine hogs you desire to purchase, you need not go farther than

MAPLE SHADE FARM

W. H. COFFMANN, Propr., Bluefield, W. Va.

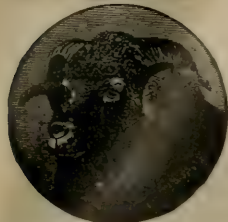
REG. POLAND-CHINAS

special offering on young boars.

bred for size, prolificacy and fine individuality; loose, mellow and easy fleshers; circular with

T. M. BYRD, R. F. D. 3, Salisbury, N. C.

STOCK SHEEP! - STOCK CATTLE!



Farmers who are intending buying stock or Breeding Ewes had better buy now or during this month to insure early lambs. I CAN FURNISH YOU WITH ANY NUMBER OF GOOD EWES or FEEDING SHEEP of any kind and on short notice.

Write For My Free Catalogue and Price List on The Sheep I Handle. This Explains Everything.

I am receiving each week good STOCK CATTLE and can furnish you any kind you may want. All orders accurately filled and satisfaction guaranteed.

If you have any kind of live stock to sell, ship it to me. I can handle it and highest market value assured.

ROBERT C. BRAUER, Richmond, Va.

COMMISSION SALESMAN OF CATTLE, HOGS, SHEEP, LAMBS, AND CALVES.

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than the government paid him, they would have a great advantage over other concerns engaged in the manufacture of Nitro-Culture, because Dr. Moore is the only man in this country or Europe, who knows how to propagate the culture and bring it to its highest state of efficiency. His retirement will be a great loss to the Department of Agriculture.

S. M. C.

Oradell, N. J.

ONE WAY OF SKINNING A HORSE.

Hides are high now, and even a horse hide is worth taking off if done in this manner. Rip the belly and legs and skin the legs down to the body, and the belly back six to twelve inches on each side, using a common skinning or butcher knife. Also skin out the tail bone and up along rump ten or fifteen inches, then loop a chain or a strong rope around this tail rump skin, running it forward past the head of the dead brute. Fasten the dead horse's body by rope on hind legs, then hitch two good live horses to rope on hide, and if they pull true and steady they will skin the horse "while you wait." Now, this is no theory, nor is it anything new, but it may be new to some and applies to any large animal whose meat has no value. In skinning any animal that has been dead long, it is a good plan to wear gloves or mittens that have been wet in a weak solution of carbolic acid, to guard as much as possible against blood poison. And if there is any possibility that a horse has died of glanders, don't skin him at all, but bury at least eight feet deep.

N. S. FRENCH.

YES I HAVE A FEW FINE

Duroc Jersey Pigs

now ready to ship. \$8 each 815 pair.

Wm. G. OWENS, The Cedars Farm, Midlothian, Va.

NOW IS YOUR TIME FOR

BARGAINS.

Sixteen service boars, 13 open gilts, four red gilts, two bred sows and pigs galore—lugs coming and going almost every day in a year. If any of larger size wanted have them booked at once as early September will take them all. Most of these are from imported blood on both sides, balance imported on one side.

THOS. S. WHITE.

Fassfern Stock and Poultry Farm,
Lexington, Va.

BERKSHIRES FOR SALE

One litter, 12 pigs out of IMPORTED RUDDINGTON DINAH 65324, a superb sow.

One litter, 10 pigs out of Lady Longfellow of Forest Home 72586. An unusually prolific sow whose pigs always grow marvelously.

One show sow pig; One show gilt, bred.

A few Boars and some Boar Pigs.

FOREST HOME FARM, Purcellville, Va.

LARGE YORKSHIRES.

The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times.

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

Address BOWMONT FARMS, Salem, Va

POLAND CHINAS

A few crack-a-jack pigs of March farrow by my fine boar, Great Big Temush 62801, who weighed over 600 pounds at 14 months old. Just in good growing order. Also 8 to 10 weeks' old pigs sired by a half brother of the senior champion boar at the St. Louis World's Fair. This boar was sired by Corrector, who stands to-day without a peer as a sire of show pigs. One-half interest in Corrector sold for \$2,500. Write for prices, testimonials and references that will convince you that I am selling the best Poland Chinas in Virginia at prices within reach of all. Also SHROPSHIRE RAMS and SHORTHORN CALVES. All stock shipped subject to being returned at my expense if not satisfactory. J. F. DURRETTE, Birdwood Albemarle county, Va.

TO FILL THE SILO.

Succotash Makes Excellent Rations For Cattle, Hogs and Sheep.

The silo is accommodating and its capacious insides will take almost anything green that is fit for stock and convert it into muscle and fat.

Soy beans, cow peas, sorghum and corn for silo or succotash feed is unsurpassed by an other combination of green material for filling the silo or for cured feed, one part of each cane seed and corn and two parts of cow peas and soy beans.

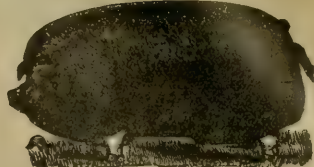
An Ohio farmer uses a wheat drill, closing every alternate hole, and the result is wonderful as to growth and quantity. He did not silo any but says he is sure it would make more silage per acre than corn alone. The corn and cane grow large enough and thick enough to support the vines of the peas and beans off the ground so that the mower and binder can get practically all of it.

If it is the intention to bind for the silo, a good plan is to drill with the common drill corn planter, three feet six inches wide, about May 25th to June 10th after thoroughly preparing the ground, and plenty of well rotted manure. As soon as possible after coming up, cultivate with shovels and eagle claw and then straddle the rows with the same drill and quantity of seed, and after that the rapid growth will smother the weeds, the early cultivating leaving the ground in good condition for this.

Sow Whippoorwill or Black peas, but as to harvesting, just start the rake as soon as the machine is out of the way and shock about two rakes full and let it stand until dry before moving. The pea leaves, being large and green, droop and shed water, the cane doesn't need any sun and the few corn stalks will not mould. This is supposing you mow for fodder. If for the silo, of course the binder would be best. If mowed, raked and shocked, they will do until needed for use, just as well in the field and even better than if stored in large quantities under cover.

Some Canadian farmers have adopted the plan of killing their beeves and cutting them up when the weather becomes cold, then dipping them in water until they become coated thickly with ice and packing them away in barrels in straw in some cool place. It is claimed that meat can thus be kept in good shape until the heat of summer is somewhat advanced.

POLAND-CHINAS.



I have a limited number of Pigs by my fine Boars, Gray's Big Chief, 57077

GRAY'S BIG CHIEF 57077

and Victor G. 57075, and can furnish pairs not akin or related to those previously purchased. Young Boars and Sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address J. B. GRAY, Fredericksburg, Va.

WE ARE STILL IN THE BUSINESS

"HILL TOP" STOCK at Shadwell, Va.
Southdowns and Shropshire Sheep, Berkshire Hogs,
B. B. R. Game Chickens, Fox and Deer
Hound Puppies.

We now have very few Berkshire Pigs, but what we have are the right kind. Have only a limited number of Sheep for sale. Have young Hounds of Walker Strain, and a few young ones of Virginia families, that have speed, and the staying qualities. We are hunters and know what good ones are.
We have won more premiums on Sheep and Hogs at State and County Fairs than all other breeders in Virginia, combined.

H. A. S. HAMILTON, & SON, SHADWELL, VA.

RED POLLS For Sale.

One registered bull. Four Cows, served, 5 years old. Four yearling heifers: the cows and yearlings are high grades, from best English Stock, from $\frac{3}{4}$ to $\frac{7}{8}$ to pure-bred. Will sell at a low price.

Several yearling GUERNSEY BULLS, JERSEY HEIFERS and CALVES.

BERKSHIRE boars ready for service. Sows in pig and pigs, pairs and trios, not a akin.

M. B. ROWE & CO., Fredericksburg, Va.

EDGEWOOD STOCK FARM - - DORSETS. - -

Our Dorsets all sold again. We urged you to place orders early. Our Fall Lambs will start in October. Will book orders now. We thank our friends for their kind words—"Kind words are more than coronets." J. D. & H. B. ARBUCKLE, Maxwellton, Greenbrier Co. W. Va.

N. B.—We may be persuaded to sell five ewes in lamb.



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SOUTHERN PLANTER.



TWO BRIGHT WOMEN WINNERS.

Small Farm.

(Amelia Ann, Illinois.)

For some years we have been making butter for private customers. We have no separator or silo, but manage in our small way to get from five to fifteen cents a pound above market price for our butter within four miles of our farm. We keep a pretty accurate account of the cost of feed and know that our dairy is paying us. We number six adults in the family and the care of our milch cows does not fall with great force upon any one of us. Our butter route was worked up and developed by the two ladies of the family, and they care for the milk; however, they do not do the milking, or the churning when it is very heavy. If we lived near a large town we would sell milk instead of butter, and some day we hope to get a separator, as we fully realize what it would be worth to us.

Our daily programme is as follows: The cows are curried and brushed the first thing in the morning; then fed and then they are ready for the milker. He comes with two buckets, one containing cold and the other warm water. A clean cloth is used with the warm water to wash off the udders and teats wiped with it, and this leaves the a rinse; and then a cloth is wrung out of the cold water and the udder and teats wiped with it, and this leaves the teats slightly moist, firm and clean. We have found this the proper state for them to be in, and there is no dust or scuff to drop into the milk and taint it before it is strained.

This may seem a lot of trouble, but our milkers are used to it, for it has always been their regular routine and they "don't know any better." When the pail is full it is at once taken to the house and strained into tins, which are put in a cool, airy place for an hour; after which they are put into the ice chest. First, however, the milk of the previous morning is lifted out of the chest, skimmed and the cream added to that skimmed the evening previous. The whole is then stirred briskly and returned to the "warmest" corner of the chest, where it remains for at least twelve hours; after that it is lifted out, stirred again and allowed to rise to the proper temperature and churned.

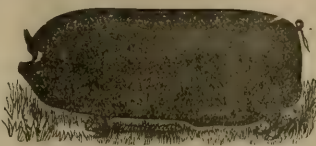
WOODSIDE BERKSHIRES.

EVERY THING SHIPPED ON APPROVAL,

We are now offering some very choice pigs sired by my two great boars, LUSTRE'S CARLINSE OF BILTMORE, No. 72087, and MASTER LEE OF BILTMORE No. 72679, and out of sows weighing from 500 to 600 lbs. each in only fair breeding condition. For the next 30 days I will sell strictly choice pigs at greatly reduced prices, in order to make room for Fall Litters. To show our confidence in what we offer and insure satisfaction to our customers, we will ship pigs ON APPROVAL, and if not entirely satisfactory in every respect, you can return them at MY EXPENSE. In other words you can see the pigs before you buy. Address,

WOODSIDE STOCK FARM.

R. S. FARISH, Prop., Charlottesville, Va.



WALTER B. FLEMING, Proprietor of the Bridle Creek Stock Farm, Warrenton N. C.

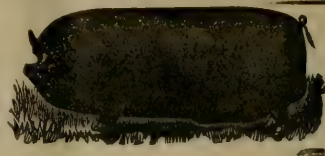
HILL TOP STOCK FARM.

I have increased, and, if possible, improved my stock of royally bred Berkshires. I defy competition either in quality or price. That superb young boar, "Shenandoah Chief," bred by Lovejoy & Son from imported stock with CLARA BELL CHRISTINE and other well known sows are among my herd.

Boars ready for service. Sows and pigs for sale. Write quick. S. BROWN ALLEN, Staunton, Va.



We POSITIVELY GUARANTEE to breed any ship the very best strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.



CHESTER WHITES

Registered herd—First Premium Stock; largest and most prolific hog on record; 8 Sows 41 pigs breeding stock 400 to 700 pounds; easy feeding; service boars sows bred. Fancy pigs for sale. My time to this breed 9 years. The best money can buy and feed produce.

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References: Farmers and Merchants National Bank, Winchester, Va.

OAK HILL FARM

SADDLE AND THOROUGHbred HORSES,
ABERDEEN-ANGUS AND JERSEY CAT-
TLE, BERKSHIRE, POLAND-CHINA, DUROC
JERSEY AND TAMWORTH HOGS - - -

White Plymouth Rocks, White Holland Turkeys, Pekin Ducks
and Pea Fowls. Eggs in Season.

SATISFACTION GUARANTEED. WRITE FOR PRICES.

Shipping Point, Oak Hill, (station on farm) D. & W. Railway 15 miles West of Danville, Va.

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Water Supply for Country Homes

PUMP'S WATER BY WATER POWER.

RIFE AUTOMATIC HYDRAULIC ENGINE

No Attention. No Expense. Runs Continuously.

Complete System Extending to Stable, Greenhouse, Lawn, Fountains and Formal Gardens.

Operates under 18 inches to 50 feet fall. Elevates water 90 feet for every foot fall used. Eighty per cent. efficiency developed. Over 5,000 plants in successful operation. Large plants for towns, institutions, railroad tanks and irrigation. Catalogue and estimates free.

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**1150 LB. HOG PRODUCED BY
3 FEEDS FOR ONE CENT**

We will pay you \$500 in cash if this engraving is not a correct reproduction of the photograph of this hog as sent us by M. R. Gasaway, said photograph being on file in our office for inspection.

A 1150 LB. HOG RAPIDLY GROWING TO A 1700 LB. HOG

INTERNATIONAL STOCK FOOD CO., Minneapolis, Minn.

DEAR SIR:—I enclose photograph of our big hog which is 39 inches high, $7\frac{1}{4}$ feet long and weighs 1150 pounds. This hog is strong and active and we believe he will develop into a 1600 or 1700 pound hog with continued use of "International Stock Food." Yours truly, THOS. GASAWAY, Latham, Ill.

WE HAVE THOUSANDS OF TESTIMONIALS ON FILE IN OUR OFFICE AND WILL PAY YOU \$1000 CASH IF THEY WERE NOT WRITTEN TO US BY PRACTICAL FARMERS AND STOCKBREEDERS.

\$1000. IN CASH PREMIUMS

FOR MEN, WOMEN, GIRLS AND BOYS
WHO USE

"INTERNATIONAL STOCK FOOD"

For Horses, Cattle, Sheep, Goats, Colts, Calves, Lambs, or Pigs. You have as good a chance as anyone in earning one or more of these spot cash premiums and you may receive several hundred dollars without one cent of extra cost to you. These 24 Cash Premiums are absolutely free for our friends and customers who are feeding "International Stock Food".

If you have not received our complete list of these 24 premiums we will mail you one if you write to our office and request it. The smallest premium is \$25.00 cash and the largest is \$125.00 cash.

Dan Patch 1:56 COLORED Lithograph ABSOLUTELY Free

This Splendid Picture is a Reproduction of a Photograph which was taken by our own artist. It is 18x24 and in Six Brilliant Colors. It is as life like as if you saw Dan coming down the track and shows him pacing a 1:56 clip with every footstep of the ground. Every Farmer and Stockman should have a picture of the Fastest harness horse that has ever appeared on earth. Dan is in better shape than ever this year and will surely lower his own wonderful record. In his first public appearance this year he paced a mile in 1:52 1/2 at the Minnesota State Fair and he followed this up in four days with a mile in 1:57 1/2, with the last quarter in 27 1/2 seconds, which is a 1:30 gait. Dan has been eating "International Stock Food" every day for three years and it has given him better digestion and assimilation and more strength, endurance and speed. He was not a champion when we bought him but has broken eight world records since that time. **DAN PATCH 1:56 IS OWNED BY INTERNATIONAL STOCK FOOD CO.**

THIS BEAUTIFUL PICTURE MAILED FREE POSTAGE IF YOU WRITE US

1st.—HOW MUCH STOCK OF ALL KINDS DO YOU OWN?

2nd.—NAME PAPER IS WHICH YOU SAW THIS OFFER.

INTERNATIONAL STOCK FOOD CO., MINN., U. S. A.

...ROYALLY BRED STOCK...

JERSEYS

Our herd is headed by MARETT'S FLYING FOX, imported son of the famous Flying Fox and GOLDEN PETER, of the celebrated Uncle Peter and Tulip strains.

—FOR SALE—

Several beautiful heifers and splendid bull calves by these bulls, and also by FORFARSHIRE and FLYING FOX'S REK, imported prize winners.

BERKSHIRES

Herd headed by MONTVIEW FAITHFUL, greatest young Berkshire boar ever brought to Virginia. Son of the famous MANOR FAITHFUL, Imp. sold at Baltimore for \$615, weighing 900 pounds.

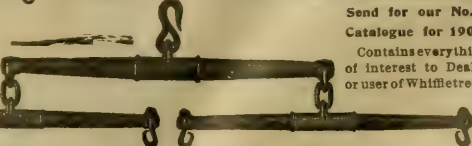
—FOR SALE—

Some fine pigs by this boar out of royally bred sows. Three beautiful gilts by DORET LEE OF BILTMORE, and three very handsome young boars ready for service.

MONTVIEW STOCK FARM, Box 513 Lynchburg, Va.

The Everlasting Tubular—Steel Plow Doubletree

Guaranteed "not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



Send for our No. 8

Catalogue for 1905.

Contains everything of interest to Dealer or user of Whiffletrees.

PATTERN No. 105 EQUIPPED WITH FORGED TRIMMINGS.

Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

Pittsburg Tubular Steel Whiffletree Company,

SOLE MANUFACTURERS

PITTSBURG - - PENNSYLVANIA.

STANDS UP FOR COW PEAS.

That it pays to cultivate peas needs no argument with me. While I do not contend that cultivated peas are as easily cut as those sown thickly, yet the greater amount of foliage and

When the butter appears the size of wheat grains the butter milk is drawn off and its bulk in water just from the well poured into the churn; the churn is then gently agitated to force the water to reach each grain of butter. This is then drawn off and a like amount of water added to the butter.

The butter is then washed and lifted out; the salt added, and the butter worked up into pound or two-pound rolls, according to our customers' demands. Each roll is wrapped in cheese cloth and packed in an earthenware crock and put in the cellar. We deliver butter twice a week.

Sometimes, however, we reverse the order here given, and churn in the morning, but we never churn cream of different skimmings unless it has been mixed together and allowed to stand at least twelve hours to ripen properly before churning. In the evening the cows are milked before it gets dark, as milking after dark and working in the dairy by lamp light is not at all satisfactory.

less weeds and grass more than offset all objections to cultivation.

That peas will not make a crop on land too poor to produce any other and of crop is undoubtedly true, but on fairly good land they are as sure a crop as any other catch crop that I know of, in this locality, and they stand the drouth and hot winds better than any other crop, sorghum included, and instead of injuring the soil, they build it up.

Last season we planted 20 acres of peas with the corn planter, doubling the rows, using medium 10-inch plates and a half bushel of seed per acre. The crop was a fair one, and on September 5th we turned 44 hogs, 15 sheep and 8 steers into the field. All the stock commenced gaining in flesh at once, and October 10 about finished the peas and all did well, but I doubt whether the amount of feed obtained equals one of clover or corn. However, it was more easily obtained than corn and much more quicker than clover.

Illinois.

E. F. ISLEY.

SOUTH NEEDS ALFALFA.


Will Grow Well on Drained Soil if Properly Seeded.

The South needs alfalfa as much, if not more, than any other crop, outside of the great staples. It has no equal as a hay producer and a fattener of hogs and cattle. It will produce four crops in most of the Southern States and occasionally five crops are gathered in one season. Alfalfa will double the value of some land in four or five years. In some of the middle states good alfalfa land is worth from \$60 to \$100 per acre, although the markets there are not as favorable as our own. There are many farms in Virginia, North Carolina and Tennessee that are now producing from \$50 to \$75 worth of alfalfa per acre every year. Some of this land was supposed to have been worked out ten years ago.

Alfalfa may be used in the silo when cut at the proper stage, but its greatest value is in hay. Cattle and hogs thrive upon it, sheep like it better than anything else, but it is not regarded as a good feed for horses.

Alfalfa is not new to the South. It was brought to North Carolina by Paul C. Cameron, in 1835, who owned a farm near Hillsboro and has been growing here ever since. Alfalfa has attracted but little attention in the South, however, until during the past five or six years. It will grow on most of our light upland soils, but the richer the ground the better. It must have good drainage as it does not do well on soil with a clay sub-soil. It will not thrive on low wet ground and is easily healed out by freezing.

More depends upon the preparation of the soil than on the growth of the



Scalp Diseases

Scaly eruptions, scald head, milk crust and all forms of eczema of head or face, yield quickly to the magical influence of Heiskell's Ointment. This ointment always itching and burning sensations, cools the skin, *heals* the irritated surfaces.

HEISKELL'S OINTMENT

has half a century of cures back of it. It has been *proven* in the most obstinate cases. Used with HEISKELL'S MEDICINAL SOAP its healing power is actually astounding. HEISKELL'S BLOOD AND LIVER PILLS should be taken to clean up the liver and make the blood pure. Ointment, 50c. Soap, 25c. Pills, 25c.

Sold by all druggists or sent by mail.

JOHNSTON, HOLLOWAY & CO., 531 Commerce St., Philadelphia, Pa.

Sunny Home Angus.

Herd bull BARON ROSEBOY 57606 (a grandson of "Heather Lad 2nd" the greatest breeding bull ever in America,) "JESTER" 66071, (a grandson of "Equestrian," the greatest bull in Scotland.) If you want top Angus bulls come and inspect what is generally conceded to be the best herd in the southeast. I have the goods, and have sold during the past 6 months more than any other three breeders in this section. Quality tells the story. Write to

A. L. FRENCH, R. F. D. 2, Byrdville, Va.

FARM AT FITZGERALD, N. C., D. & W. RY.

GLEN ALLEN STOCK FARM. Breeder of Aberdeen Angus Cattle



"The Bulls that have Made Glen Allen Famous"

Herd headed by ALLENHURST KING 4, No. 47199, son of McHenry Blackbird 20th, 32499, assisted by POLLY'S ITO, 73790, son of Prince Ito, 50066, the famous \$9,100 bull.

Young Bulls for sale at reasonable prices, fit to head the best of herds, regardless of price or breeding.

W. P. ALLEN, Proprietor,
R. F. D. No. 1, Ewing, Va.



The Delaware Herd of

ROYAL ANGUS CATTLE

is not surpassed either in breeding or individual animals by any herd in the East. At the head of our herd is

PRINCE BARBARA, 68604.

the son of the great \$9,100 Prince Ito. Females of equally choice breeding. Write your wants remember, we take personal care of our cattle; keep no high priced help; incur no expense of exhibiting; all of which enables us to offer stock at equitable prices. Send for pamphlet.

MYER & SON, Prop.,

Bridgeville, Del.

When corresponding with our advertisers always mention the
SOUTHERN PLANTER.

plants and a disregard for this has led to many failures. A perfect seed bed must be made. The ground should be enriched with plenty of stable manure. Many farmers have found it better practice to sow in the fall because of the large number of weedy grasses that spring up in the springtime on most of our cultivated lands and check the early growth of the young plants. However, if the ground is cleaned, alfalfa may be sown in the spring to advantage. About thirty pounds of seed per acre will give a good stand. Alfalfa grown in the South is less rank than that of the West, although on rich soil it produces very heavy crops, often as much as three tons per acre in one season.

WHEN TO CUT ALFALFA.

Alfalfa should be cut when not more than one-tenth of the plants have come into bloom. Cut at this early stage, the yield of hay for the season will be much than if cut near maturity and every pound of hay secured will be worth more for feed. At the Kansas Station a strip through a field of alfalfa was cut when one-tenth was in bloom and another strip after full bloom has just passed. The strip cut early was nearly ready to cut the second time when that cut after full bloom was being harvested the first time. The strip cut early grew vigorously through the season and made three cuttings and a good aftermath.

The strip cut after full bloom gave a low yield the first cutting and did not grow sufficiently to yield a good second cutting. Early cuttings seem to invigorate the plants. The late cutting of the first crop seems to injure the plants more than at any other time and it has been found profitable to cut alfalfa the first time as soon as one-tenth was in bloom, even though the weather is off. The increased yield from succeeding cuttings over that cut late much more than makes up for the loss of the first crop.

HELP OF SPECIAL COURSES.

Teach Farmers Many Things They Must Know to Succeed.

Some pretty good farmers believe they have learned all there is about good farming, but if they should attend one of the special courses of their agricultural colleges this fall they will be surprised to learn how many things they do not know. Never too old to learn is a maxim never to be forgotten and the man who imagines that he has learned it all about anything in this world has struck twelve and will in time be left in the dust of the more progressive fellows who are always learning.

THE MARK AND THE MOTTO "The Recollection of Quality Remains Long After The Price is Forgotten"

Trade Mark Registered.



The difference in *worth* between a good tool and a poor one is always more than the difference in *cost*. Counting the time wasted in constant sharpening and the short life of inferior tools, a poor tool is really more expensive than a good one.

Whenever you need a tool of any kind, it will pay you to buy the Keen Kutter brand, and have the best. All kinds of tools are made under this name, and every kind represents the very highest quality of material, workmanship and finish.

KEEN KUTTER

tools have been the standard of America for 36 years and are the only complete line of tools ever to receive an award at a great exposition—the Keen Kutter line being awarded the Grand Prize at the St. Louis Fair.

Following are some of the kinds of tools made under the Keen Kutter brand: Axes, Adzes, Hammers, Hatchets, Chisels, Screw Drivers, Auger Bits, Files, Planes, Draw Knives, Saws, Tool Cabinets, Scythes, Hay Knives, Grass Hooks, Brush Hooks, Corn Knives, Trowels, Pruning Shears, Tinners' Snips, Scissors, Eye Hoes, Shears, Hair Clippers, Horse Shears, Razors, etc., and knives of all kinds.

If your dealer doesn't keep Keen Kutter Tools write us and we will see that you are supplied.

SIMMONS HARDWARE COMPANY,

St. Louis, U. S. A.

298 Broadway, New York.

Send for
Tool
Booklet.

"Paints that stay Painted."

PAINT is what you need. Do you know that PAINT will preserve and improve your property? PAINT will give your property a prosperous appearance. PAINT will increase the value of your farm. We have PAINT on hand for everything—PAINT for roofs and barns. LYTHITE COLD WATER PAINT Carriage and wagon PAINT. Our "Standard" house PAINT is ready-mixed, and for the money no PAINT can surpass it. Write us for PAINT prices and color cards.

JOHN W. ATKINSON & CO.,
Richmond, Va.

These special courses are not given in all states but wherever they have been given they have created the deepest interest and we have yet to hear of a farmer who has attended one of them who complains that the time was wasted. These courses run from ten days to two or three weeks and consist of practical instruction on corn growing, stock raising, stock judging, soils and the main things that a farmer must know. It is a mistake to suppose that agricultural education is for a select few. The states support their agricultural colleges for the purpose of educating all farmers, rich or poor, old or young, and their splendid equipment and educated men are at the service of every farmer in the state who really wants to learn more about his business.

The tremendous interest taken in these special courses is shown in Connecticut where the art of farming is generally supposed to be lost. Last year 170 farmers, some of them over sixty years of age, registered for the course. In Iowa there is not room enough at the college for all the farmers who want to take the course of special instruction.

That the results of these courses are of the greatest benefit is well known to those who have watched their progress and there is no doubt that when the work is in full swing in every state the production of crops will be largely increased and improved and millions will be added to the wealth of the farmers.

HOW STABLE MANURE WORKS.

Lightens and Aerates the Soil and Holds Moisture.

It does not seem possible in this age of books and newspapers and agricultural colleges that there could be found a man so ignorant as to believe that manure "poisons" the ground. Yet such beliefs still exist in some of the backwoods sections of the South. But these cases are rare indeed. The mechanical value of stable manure is becoming recognized more generally in these days.

We are learning that in various ways the structure of the soil is affected more by the presence of the barnyard manure than by the chemical manure. On heavy soils the advantage of barnyard manure over some other manures is very apparent. The adding of humus to the soil is one very important way in which the barnyard manure aids the soil. There are others. One of these is to lighten up the soil and let it in the air, which will be followed by the growth of rootlets to still further make the soil porous.

The hard clay soil is not easily permeated by the roots of plants, even when it has a good deal of plant food in it. The texture of the soil is so



ACTOR 25th, 1902SS

INGLESIDE HEREFORDS

Owned by S. W. Anderson, Blaker Mills, Greenbrier county, W. Va.

A choice lot of BULLS, COWS, and HEIFERS for sale. Also a few POLAND HEREFORD BULLS recorded in the National Polled Hereford Records. Write for catalogue and prices. Farm near Alderson, W. Va., on the C. & O. R. R. Telegraph and Telephone office, Alderson, W. Va.

Bacon Hall Farm.
Hereford Cattle :-:- Berkshire Hogs.
REGISTERED-ALL AGES.
DORSET RAMS.
Toulouse Geese, Muscovy Ducks.
MOTTO: Satisfaction or no Sale.
E. M. GILLET & SON. - Glencoe, Maryland.



a choice collection of famous prize winning IMPORTED and HOME bred mares. Stud Cotts for sale reasonably. Write us a letter. ROSEMONT FARM, Berryville, Clarke Co., Va.

ROSEMONT HEREFORDS.

Finest and Largest Herd in the South and East. U. The famous ACROBAT, greatest living Hereford sire at head of herd, assisted by the great son of BEA DONALD, CHRISTMAS BEAT DONALD, BENISON PROTECTOR, by \$5 000 Imp. CHAMPION PROTECTOR and MARQUIS of SALISBURY 16th, best son of Imp. Salisbury. Send for our HERD CATALOGUE, HEREFORD HISTORY and large PICTURE of the great ACROBAT. Two bull calves by MARQUIS, out of ACROBAT dams for fall sale. One finest quality, fancily bred BERKSHIRE BOAR pig for sale. We breed HACKNEY HORSES, having the prize winning AMERICUS, by the GRAND CHAMPION FANDANGO, out of the GRAND CHAMPION mare, STELLA, and



Grand Champion Prince Rupert, No. 79339.

Registered Hereford Cattle and Berkshire Hogs.

EDWARD GAY BUTLER, Annafield Farm, Berryville Va. Hereford Herd headed by Prince Rupert, No. 79339 whose son, Prince Rupert, 8th, won first prize in the 2-year old class at the recent Chicago International show. Berkshire Herd headed by Baron Premier, No. 5227, whose son, Admiral Sculley, was first int he 6 to 12 months class at the International Show, 1902. Young stock both calves and pigs for sale at reasonable prices.

CORRESPONDENCE INVITED.

ORGANIZED 1832.

ASSETS, \$1,056,360.54

Virginia Fire and Marine
Insurance Company of Richmond, Va.,
Insures Against Fire and Lightning.

All descriptions of property in country and town, private or public, insured at fair rates, on Accommodating terms.
AGENCIES IN EVERY TOWN AND COUNTY.

W. H. PALMER, President.

E. B. ADDISON, Vice-Pres't.

W. H. McCarthy, Secretary.

close that the air cannot get in between the particles, and the plants that try to grow on such soil to make but a sickly development.

The partly rotted, coarse stable manure is worked into the soil, it soon begins to decay and mix with the soil and makes minute air passages through it. Soil must have air. The roots of plants penetrate the air passages and feed upon the plant food. It was not before a matter so much of lack of plant food as texture of the soil permitting the plants to utilize that plant food.

It is a mistake to suppose that the value of barnyard manure can be told by the chemist, or that even when we have added the water holding power of the humus we have found its full value. The mechanical effect is very great, how great will depend on the kind of soil into which the barnyard manure is plowed or harrowed.

On sandy land the effect is not the same, but it is, however, beneficial. If the land is inclined to be leachy, barnyard manure is the best kind of manure to apply, as it does not permit the fertility mixed with it to be washed out and drained off. The manure holds moisture, and this is a help to the soil in dry weather. It also decays slowly, and the fertility is thus released a little at a time. During the time this is going on the crops are growing, and a million little root hairs are permeating the soil ready to take the fertility as fast as it is released by the decaying fibers. It is thus caught before it has time to soak down beyond the reach of plants.

FARMERS NOT DISCONTENTED.

Their Lives Not Monotonous, but Lively and Interesting.

(Prof. F. A. Waugh, New York.)

Were it not that the notion has currency everywhere, the statement that "in this country no one class is more radically discontent than the soil tillers" would be an inexcusable misstatement of the actual conditions. I have been on terms of personal intimacy with large numbers of farmers, on both sides of the Mississippi River, and I speak from experience and deep conviction when I assert that there is no class of people in America more optimistic of their own calling than the soil tillers.

Many observations might be cited to prove my statement. Let two suffice. (1) Farmers everywhere praise their own calling, and urge other men to take it up. They discourage in the severest terms the departure of farmers' sons and daughters for the city. There is no other calling, save that of the ministry, the followers of which so continually strive to bring others



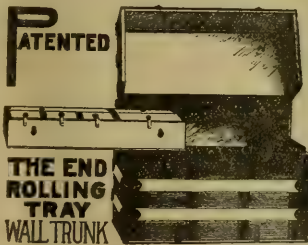
Ready to Butcher?

If you have an Enterprise Meat Chopper you are ready to butcher any time. This machine does away with all the hard work of sausage and scrap-ple-making. Saves meat and money. Cuts *fine or coarse*, just as you want it. Will save its cost in a week. Be sure the name "Enterprise," is on the machine you buy.

ENTERPRISE MEAT CHOPPERS

cannot get out of order. They cut clean and stay sharp. Will not break or rust. 45 sizes and styles, for hand, steam and electric power, \$1.50 to \$300. With an Enterprise Meat Chopper and an Enterprise Sausage Stuffer you can take care of all your meat, besides having daily use of the chopper in the kitchen. The Sausage Stuffer is also a perfect land and fruit press. Write for the "Enterprising Housekeeper," a book of 200 choice receipts and Kitchen Helps, sent free.

THE ENTERPRISE MFG. CO. of Pa., 2333 Dauphin St., Philadelphia, Pa.



THIS TRUNK FREE.

Direct from our factory. Largest 84 inch size. The most convenient for use at all times. Built for travelling. No heavy top to lift, no heavy tray to take out, sets up against the wall, leaving no space behind for accumulation of dust and various other articles. The very latest designs in covering.

You will be agreeably surprised to know how you can get one FREE by our easy way. Write for full information and return mail will bring it. Write to-day and mention this paper. H. D. THACKER & CO., Sole Manufacturers, Petersburg, Va. Established twelve years.

The Grove Stock Farm

... HAS FOR SALE ...

Holstein-Friesian Calves

of fine breeding and individuality
at remarkably reasonable prices.
Do you want something choice?

N. & W. and Southern Railways.

T. O. SANDY, Burkeville, Va.

Pulls Stumps or Standing Trees.

Clean a two-acre circle with one sitting—pulls anything the wire rope will reach; stumps, trees, rocks, rubs, hedges, etc. A man and a boy with one or two horses can run the

COMBINATION STUMP PULLER,

Stump Anchored or Self Anchoring.

A minute and a half it takes for the ordinary stump. No heavy chains or rods. Note the strong wire rope with patent coupler—grabs the rope at any point. Does not chafe rope; far ahead of old-style "take-ups." Smallest rope we furnish stands 40,000 lbs. strain. It generates immense power and it's made to stand the strain. We also make the Iron Giant Grub and Stump machine, the I. X. L. Grubber and Hawkeye Grub and Stump Machine. Write for free illustrated catalogue. Largest manufacturers of Stump Pullers in the World. Established 1884.



MILNE MFG. CO.,
834 8th St., Monmouth, Ill.



into the same work. On the other hand, many trades unions, for example, use drastic means to keep other men out of their lines of work. (2) The grange, which represents more characteristically than anything else can the real spirit of the rural population, is filled everywhere with the spirit of contentment, of hope and of optimism. Any one who knows the grange in the least, even from the outside, knows that it does not express the spirit of discouragement or discontent.

Think of the rioting miners of striking street-car men, of weavers on a lockout, all matters of every day news—and compare with these things any manifestation of discontent ever made by the soil tillers.

Farm labor is precisely the least monotonous of any in the world. Compare a man who in a day milks the cows, splits the wood, drives a young colt to harness, plants potatoes, mends a drain, sells three pigs, mixes a complicated chemical fertilizer after a recent scientific formula, doctors an ailing mare, prunes his plum trees, and does twenty other odd jobs, with the man who sits all day on a stool and pastes red labels on packages of breakfast food.

No, the farm life is good, and most of the men and women who practice it are humanly speaking, satisfied with it.

WINTER KILLING OF FRUIT TREES.

Systematic observations show that the winter killing of fruit trees, especially the peach, is largely traceable to previous care or lack of it. Low vitality, disease, weakening from overbearing, extremes in moisture, defective drainage, insufficient fertility, San Jose scale and other insect pests, all lessen the chances of a tree's resisting the effects of a severe winter.

On bare or clean cultivated soil freezing is especially destructive. A good sod is a great protection. The cultivation of corn in orchards followed by crimson clover gives good results. Banking a few forklifts of manure immediately around the stem of a tree proves effective against cold. Lack of fertility will work havoc with the fruit trees as surely as with corn or wheat.

RED WEEVIL OR WHEAT MIDGE.

This near relative of the Hessian fly is causing not a little apprehension in the middle west, over fifty counties in Ohio already reporting its presence. The gnat deposits its eggs in the opening flowers of the wheat. The larvæ feed on the pollen and the milky juice of the immature seeds, causing them to shrivel and become worthless. When full grown the larvæ drop to the

Selected Farms in Northern Virginia. Near the great markets.

No. 1. Fine fruit farm; 100 acres, in the corporation of Fairfax, fine 1,100 peach trees, 4,000 of the very best grape vines, and all other kinds of fruit and berries. 9 room frame house, large frame barn and all out-buildings, well watered. 2 miles from Farm. Just one mile from electric car. The trees are all in full bearing, and the fruit will pay for the place in a short time. This is a bargain. Price, \$5,500 cash.

No. 4. 100 acres, one of the finest farms in Virginia, in the very best of cultivation; fine, large 12 room house, large halls and cellar, water in the kitchen, beautiful lawn surrounded by hedge, all kinds of fruit and berries; very large barn and all out-buildings; first class fence all around the farm, divided fields for pasture, meadow, etc.; stream through the farm; near the town of Vienna; steam and trolley lines. Price, \$17,000; part cash, balance to suit. Would take city property in part pay.

No. 6. Fine dairy farm, 45 acres, all clear and in high state of cultivation; three-fourths of a mile from Vienna; steam and electric car lines, churches, mill and school; 12 room house, 2 large barns and all necessary out-buildings; 2 good wells; all kinds of fruit and berries. Price, \$6,000; terms to suit. Office, 1 mile from electric railroad, in cultivation and grass; all kinds of timber; well watered; 8 room frame house, basement; barn 36x60; well fenced; all necessary out-buildings; all kinds of fruit, 2 miles from railroad station, school and mill; all kinds of fruit. Price, \$3,000; \$1,000 cash, balance to suit.

No. 8. Nice home and farm of 50 acres; 40 acres clear and in high state of cultivation; 5 room house; large, new barn; all other necessary buildings; well of water at door, spring near by, and stream through place; all kinds of fruit; 2 miles from Fairfax; school, church, stores and electric cars. Price, \$3,750, on easy terms.

No. 12. 45 acres; 350 in cultivation, balance in fine timber; 9 room house; well at door, spring near by, stream through farm; 2 large barns; all other necessary buildings; also tenant house. This is a fine farm for dairy and stock, one and one-half miles from Clifton Station, on Southern Railroad; school, church and stores. Terms, \$30 per acre; one-third cash, balance to suit.

No. 13. 15 acres; 14 acres cleared, balance in timber; 2 room house, barn 14x16, and other out-buildings; spring near by; all kinds of fruit; near school, church and store; three and one-half miles from electric railroad. Price, \$525; terms to suit.

No. 13. 300 acres; 100 cleared, balance in oak timber; 3,000 peach trees and other kinds of fruit. 5 room house; barn 30x40; all other buildings necessary; one-half mile from railroad, school, store and church. Price, \$6,000; one-half cash, balance to suit.

No. 14. 20 acres; 14 acres cleared, balance in oak timber; 60 pear, 100 peach, and 100 apple trees; stream through place; near Fairfax; stores, church, school and electric railroad. This is a fine place for a henery or apiary. Price, \$1,200, on easy terms.

No. 15. 27 acres of fine land; suitable for subdivision, and is so near the electric railroad, fine building sites, in the Corporation of Fairfax. Near school, church and store. Price, \$2,700; one-third cash, balance to suit.

No. 16. 145 acres; 75 clear, balance in all kinds of timber; 3 room house, small barn, hen house, and meat house; is well watered; good fences; all kinds of fruit, 2 miles from Fairfax and Clifton Stations. Mill near place. School and church near by. Price, \$2,000; one-half cash, balance to suit.

No. 17. 155 acres; 65 clear and in good condition, balance in all kinds of timber; 7 room

house; good barn and all other necessary buildings; water in every field; good fences; all kinds of the very best varieties of fruit; 3 miles from Fairfax and Clifton Stations; near school and church; mill adjoins farm. Price, \$2,500; \$1,000 cash, balance to suit.

No. 18. 120 acres; 12 acres clear, balance in all kinds of timber; 2 room house and stable; spring and running water; partly fenced; half mile from station, school, church and store. Price, \$1 per acre; one-half cash, balance to suit.

No. 21. Very cheap farm of 100 acres; 50 cleared and in cultivation, balance in timber; 7 room house; small barn and cow shed; water in every field; good fences; all kinds of fruit; 1 mile from church, school and store, 1 mile from railroad. Price, \$1,800; terms to suit.

No. 24. Timber tract, 21 acres; one-half mile from Oakton and electric railroad. Price, \$50 per acre, cash.

No. 25. 44 acres; 38 acres clear, balance in timber; good 9 room house, with cellar; barn 30x24; large shed, cerna house, hen house and carriage house. Lasting water in every field, and good spring near house. Fenced with wire and rail; in the town of Legato; near school, church, store and post-office; 5 miles from electric railroad. Price, \$2,500; terms to suit.

No. 27. 9 1-2 acres of fine land under high state of cultivation; 7 room house, with water, and running creek; 500 fruit trees with water, bank barn 16x30; all necessary out-buildings; 300 fruit trees in full bearing. Place well fenced with wire; beautiful lawn, with abundance of shade trees and shrubbery. Price, \$4,000; \$1,000 cash, balance to suit purchaser.

No. 33. 150 acres; 75 cleared, balance in timber; 9 room house; small barn and stable; buildings well watered; all kinds of fruit; good fences; near school, church, store and post-office; 5 miles from railroad. This is a cheap place. Price, \$1,500; one-half cash, balance to suit.

No. 40. 37 acres; about 10 cleared, the balance in pine; 5 room house; spring near, two streams through the place; partly fenced; some apple trees; one-half mile from school and church, two and one-half miles from railroad and store. Price, \$580. Terms: \$150 cash, the balance to suit.

No. 50. Over 200 acres; 100 cleared; large new house not finished; a noted fine spring; stream through the place; a mile from Legato, on Warrenton pike; one and one-half miles from Leesville, school, church and store. Price, \$2,500. Terms to suit.

No. 55. 140 acres; 70 clear, the balance in all kinds of fruit; 5 room house, barn 20x40; fine spring water through the place; all kinds of fruit; 5 miles from railroad, and 3 miles from electric railroad, three-fourths mile from school, church and store. Price, \$2,000. Terms: one-third cash; the balance to suit.

No. 73. 147 acres, 25 clear, balance in timber; 1 mile from store, post-office, etc.; one-fourth mile from school. Price, \$1,100. Terms \$500 down, the balance to suit. This property is in a nice neighborhood. I think it is a great bargain.

No. 75. In Prince George county, Md. 61 acres; 5 room house, small barn and other out-buildings, 7 miles from Washington, D. C., and 5 miles from electric car. Price, \$2,000.

No. 97. 200 acres; 50 clear, and balance in timber; has a good building site; could be made into a nice home and one-half mile from Fairfax on the pike. Price, \$25 per acre, on easy terms.

No. 98. 64 acres; 10 cleared, balance in wood; near Pender. Price, \$10 per acre on easy terms.

Send for full list of my great farm bargains. Inquiries cheerfully answered.

JOHN F. JERMAN, Fairfax, Va.

ground, and further transformation is of a subterranean nature. The flies appear in May or June.

As the parasite infests the grain it is highly important that seed free from it be sown. While it is always important to run seed wheat through the fanning mill, this pest renders it doubly so. The plump grains will readily separate from the light, inferior ones which are infested with weevil. This precaution will at least tend to curb the evil.

MARKETING THE PEACHES.

Few simple schemes have proved more disappointing to the uninitiated than that of covering the peach basket with red mosquito bar. It is certainly surprising how the blush tints change to green when the cloth is removed.

Peaches, as few other fruits, depend for their market largely upon the manner in which they are marketed. Thinning out after the June drop is a save in the end. It takes less labor to pick the fruit than when ripe and the quality of that remaining more than compensates for the thinning. Size, flavor, and color given in the process and the labor of handling inferior fruit at cheap rates should be reckoned in the old way.

Peaches require the utmost care in handling. They must be picked neither too green nor too ripe. They should be sorted over carefully by grades. Inferior fruits are much better kept at home and dried or made into butter than slipped in with the good fruit, thus detracting from one's credit as well as from the sale of the prime fruit.

Those near a good market have a vast advantage. Yet in all places there are liable to be gluts which prove disastrous. If one could only know of the small towns not far removed from the big cities overstocked it might often work to the great advantage of both buyer and seller. This problem of distribution is a serious one, and yet to be worked out. Certain it is that the seller does well to have his fruit in not too large packages, and to have various outlets; "A good name" and the names of buyers both large and small are important. Drying and canning the surplus also help out of emergencies. And even the home canned fruit may yield a goodly profit in the winter months if carefully prepared and sealed. A local market among the well-to-do, who prefer buying to canning, is worth gaining.

POINTERS ON SEEDING.

In Great Britain they sow about twice as much seed per acre as we do, and raise about twice as many bushels per acre. I sow about one and a half bushels per acre, but don't know whether more or less would be better. I don't know exactly the right time to



O. L. Chase
St. Louis, Mo.

your walls. When you have done so, if the paint is entirely satisfactory, come in and buy the balance of your order. If not, these 2 gallons are a present from me as a test. You would think it was a mighty fair offer, wouldn't you?

But no paint dealer ever makes this kind of an offer. * * *

I am not keeping a paint store.

I am running a paint factory.

My paint is not sold over the counter.

I sell it direct from my factory to the user fresh.

Let me make you a better and more liberal offer than the above.

Here it is.

Let me ship you an order of paint. I will pay all freight on 6 gallons or more.

You sign no contract, obligation, or send me a penny of money in advance.

When the paint arrives choose any 2 full gallons of the order, spread it on your building—it will cover 600 square feet. 2 coats—then you be the judge as to whether you want to use the balance of the order or not.

If not, return the balance of the paint—I will pay the freight back and the 2 gallons used are yours, free, for the test.

If the paint spreads better—further—and looks better than any paint you ever saw, and you want to use the balance of the order, keep it and pay me at the end of 6 months.

With the paint I send my pen-and-ink signed iron-clad Guarantee that it will last 8 years.

This Guarantee is binding and saves money back at the end of the Guarantee period if the paint is not as represented.

The reason I can make you this liberal

I Am the Paint Man

Let Me Give You 2 Gallons of My Paint As a Test

offer is because I manufacture and sell paint in a new way.

My pigment, or paint base, which is white lead, zinc, coloring matter and drier—is ground fresh to order after your order is received, hermetically sealed in cans, dated the day it is packed, and shipped in separate cans from the oil.

My Pure Old Process Linseed Oil is shipped in a twin can.

My paint is ready to use but NOT ready mixed.

There are reasons for my manufacturing and selling this way. Good reasons.

Reasons that permit me to give an 8 Year Guarantee.

Briefly, here they are:

Paint pigment is a mineral.

Pure linseed oil is a vegetable.

When packed together the chemical action of the mineral pigment eats the life out of the oil—that shortens the life of the paint.

The process linseed oil is scarce on the market.

Oil used in finely mixed paint is usually adulterated.

My oil is pure.

Shipping it separately gives you a chance to prove it.

Ready mixed paint settles—a cement-like substance forms in the bottom of every can.

This can never be properly mixed again by hand.

My method of shipping pigment and oil separately, does away with all settling. You can use every drop out of every gallon of my paint on your walls, and you get the full life of the paint on your buildings.

* * *

I want to tell you more about my plan.

Just drop me a line today, asking for my Paint Book, copy of my Guarantee, and other printed matter, which includes my free instructions "This Little Book Tells How to Do." They are all FREE.

Do it now while you think of it.

O. L. CHASE,
The Paint Man,

607 F Locust Street, St. Louis, Mo.

NOTE—My 8 Year Guarantee backed by \$50,000 Bond.

"PLANET JR." FARM AND GARDEN TOOLS

Seed Drills and Wheel Hoes combined. Single Wheel Hoes, Double Wheel Hoes, Cultivators, Horse Hoes, Sulky Cultivators.

"Planet Jr." No. 8 Horse Hoe & Cultivator

here illustrated, is the most complete of its kind ever offered to the farmer. It is stronger in design and construction. The amount of work and variety of uses to which it may be adapted will only be appreciated and realized after using one for a season.

DESCRIPTION—Frame—Extra long and high—hard to bend and slow to clog.

Shanks—Hollow steel and clamping both sides of frame, strengthening each.

Depth—Regulated by wheel and runner, instantly adjusted by lever.

Expansion—By lever from 8 to 25 inches.

Side Hoes—Are for taking from and putting to the crop. Set at all angles and are reversible. Can be removed and small steels put on.

"Planet Jr." Catalogue—Postage free to anyone, also our own illustrated catalogue. Trade discount to dealers on all Planet Jr. goods.

FULL LINE FARM TOOLS AND SUPPLIES

Norfolk Farm Supply Co.

WHOLESALE AND RETAIL

Address Care Dept. No. 6.

41-51 Union St., Norfolk, Va.

sow wheat in the fall in order to obtain the greatest yield. One of our neighbors sowed the last week in August, and harvested only half a crop. Another sowed so late that the planting did not come until the next spring, and raised a good crop. Nobody is likely to follow either of these extremes. I know it will do to sow on rich land later than on average soil, because the rich soil burries up the growth faster and enables the plants to cover the ground before winter. Wheat sown too early is liable to be injured by the Hessian fly; sown too late, it does not have time to stool out and cover the ground to protect the roots against freezing.

J. W. INGHAM.

Pennsylvania.

THE FALL WEB-WORM.

Just now there is no greater eye-sore in farm surroundings than the silken webs filled with dark colored white-haired caterpillars which abound on the trees of orchard and lawn.

These should not be confounded with the tent caterpillar, which abounds in early summer. They are the larvae of a moth which flies at night, and varies in color from pure white; white thickly studded with brown spots. The moths emerge in May or June from pupae which have passed the winter under loose soil and rubbish at the foot of the tree. The eggs are placed in clusters near the tips of branches. On hatching, the process of web-building and eating begins, and soon a large cluster may be formed.

Cut the nests and burn with kerosene, or spray with arsenites, using sufficient force to penetrate the web.

CATARRH IN SHEEP.

This is not infrequent among sheep which have not ample protection in winter; or it may result from lack of sufficient food. In a mild form it is simply a drain on wool and flesh growth, but should be overcome to secure the maximum profit.

A simple remedy is tar, which can be applied on the nose of each by dipping a thin piece of web into the tar bucket and rubbing it on the nose of the sheep. An ingenious farmer bores holes partly through the bottom of his salt trough and fills the cups thus formed with tar. In eating the salt they thus get a dose that is effectual. One part of sulphur to five of salt is sometimes used for the same purpose.

The best preventive is non-exposure. Dry and well ventilated stables in cold weather are highly important.

RUBEROID ROOFING



STANDARD FOR 14 YEARS.

The oldest prepared roofing on the market, and the first Waterproof Roofs laid, many years ago, are still giving satisfactory service under the severest climatic and atmospheric conditions.

Contains no tar or paper; will not melt, rot or burn. Acid rains will not injure it. Certain metal or obstructions. Any handy man can apply it.

There is only one Ruberooid Roofing, and we sell it. You can verify its genuineness by the name on the label and on the outer side of every length of Ruberooid Roofing. Send for samples and booklet.

A large stock of Corrugated and V Gutter Roofing always on hand.

Southern Railway Supply Co.,
1323 East Main Street
RICHMOND, VA.



Steel Roofing, \$1.50 Per 100 Sq. Feet

Painted red both sides, most durable and economical covering for roofing, siding or ceilings, for barns, sheds, houses, stores, churches, crabs, poultry houses, etc.; easier to lay and cheaper than any other material, no experience necessary to lay it—a hammer or hatchet the only tools you need. At this price material is sent to all points east of Colorado, excepting Oklahoma, Texas and Indian Territory. At this price we furnish our No. 15 semi-hardened flat steel roofing, about 24 inches by 24 inches. At \$1.00 this same material corrugated as shown in illustration, or in V-clipped, or standing seam. At 50 cents per square advance over above prices we will furnish this material in 6 and 8 feet long. \$2.25 for brick siding or beaded ceiling or siding. Send us your order for immediate shipment. Time will prove its enduring quality. It withstands the elements the best of all coverings. Ask for further particulars. WRITE FOR FREE CATALOGUE NO. A. M. 100 on building material. Wire, pipe, plumbing material, furniture, household goods, clothing, etc. We have at SHELBYVILLE, KY. 100,000 feet of lumber from the World's Best.

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UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline engine superior to all other cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost—portable generator or traction. Mention this paper. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mfrs., 1000 Webster & 18th Sts., Chicago. THIS IS OUR FIRST-YEAR YEAR.

CLUBBING LIST.

In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

DAILIES.	With Alone.	S. P.
Times-Dispatch, Richmond, Va.	\$5 00	\$5 00
Times-Dispatch (without Sunday)	3 00	3 00
News-Leader, Richmond, Va.	3 00	3 00
The Post, Washington, D. C.	6 00	6 00
The Sun, Baltimore, Md.	3 00	3 40
THREE A WEEK.		
The World, New York	1 00	1 25
WEEKLY.		
Times-Dispatch, Richmond, Va.	1 00	1 25
Central Presbyterian, Rich- mond, Va.	2 00	2 25
Religious Herald, Rich- mond, Va.	2 00	2 25
Southern Churchman, Rich- mond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	2 00	1 50
Country Gentleman	1 50	1 75
Hearst's Dairyman	1 00	1 30
Horseman	3 00	3 00

SEMI-MONTHLY.

Kimball's Dairy Farmer...	1 00	75
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MONTHLIES.

The Century	4 00	4 25
St. Nicholas	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's	3 00	3 25
Frank Leslie's	1 00	1 25
Cosmopolitan	1 00	1 25
Everybody's	1 00	1 25
Munsey	1 00	1 25
The Strand	1 00	1 25
Madame	1 00	1 00
Argosy	1 00	1 25
Review of Reviews	3 00	3 00
Field and Stream	1 50	1 50
Woman's Home Companion ..	1 00	1 25
Reliable Poultry Journal..	50	75
Poultry Success	1 00	75
Blooded Stock	50	65
Successful Farming	1 00	60
Southern Fruit Grower ..	50	55
Shepherd's Criterion	50	75
Commercial Poultry	50	75

When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with Southern Planter."

We cannot under any circumstances furnish sample copies of our publications.

We will cheerfully quote our best price on any list of publications submitted to us.

Seed House of the South.

RED CLOVER.
HAMMOTH CLOVER.
CRIMSON CLOVER.
WHITE CLOVER.
LUCERNE CLOVER.
ALSYKE CLOVER.
BOKHARA CLOVER.
JAPAN CLOVER.
BUR CLOVER.



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ORCHARD GRASS,
RED TOP or
HERDS GRASS,
KENTUCKY
BLUE GRASS,
RANDALL
GRASS,
TALL MEADOW
OAT GRASS,
JOHNSON
GRASS,
GERMAN
MILLET,
BUCKWHEAT,
OATS and
CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are

RAGLAND'S PEDIGREE TOBACCO SEEDS.

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For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

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Apples,	Nectarines,	Pecans,	Ornamental and
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Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

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SEED OATS FOR SALE

1500 Bushels VIRGINIA GREY WINTER OR TURF.

This is without doubt the best WINTER oat in America. These oats were sown in the fall especially for seed and are guaranteed absolutely true to name, are of a very superior quality and extra heavy. Grown in Albemarle County, in the Piedmont section of Virginia, where the best seed oats obtainable are produced. Samples sent on application.

In order to close out my crop, I will fill orders for the next 30 days at 60 cents per bushel of 32 lbs. F. O. B. here.

WOODSIDE STOCK FARM, R. S. FARISH, Prop., Charlottesville, Va.

SPUDS RAISE THE MORTGAGE.

New York Farmer Digs His Way Out of the Ground.

(Clarke M. Drake.)

When T. E. Martin, a Monroe county, N. Y., farmer, got possession of his land several years ago it was producing about 60 bushels of potatoes per acre. Other crops were nothing to speak of, but he went to work in a determined way to improve the place. The farm was poorly drained, so, year by year, he has been putting down the drains, until he now has nine miles of them planted. The work was done with care and system, so the benefit from them would be permanent. The depth of the drains varies from four to four and one-half feet, and the distance apart is about fifty feet. The two general outlets are protected by concrete casing, and so grated with iron rods as to exclude any animal that might do injury. A diagram, carefully made, shows the exact location of every line of tile.

The following record of his potato crops shows what he has done: 1901, 4,570 bushels from eighteen acres, averaging 254 bushels; 1902, 4,715 bushels from seventeen acres, averaging 277 bushels; 1903, 4,718 bushels from eighteen acres, averaging 262 bushels; 1904, 5,100 bushels from eighteen acres, averaging 283 bushels. In 1902 a plot of ten acres averaged 306-2-3 bushels, and he thinks that, were it not for the early frost in the fall of 1904, the entire eighteen acres would have averaged 300 bushels an acre.

The cost of draining (\$2,000), added to other indebtedness on the farm, placed him under an uncomfortable weight of \$4,500 debt. This fact, coming to the knowledge of the neighbors who had been criticising and watching, made them chuckle and say, "I told you so." In four years this debt was paid, and a surplus placed in the bank.

The tile draining merely opened the way for improved farming. Under a three-year rotation—potatoes, wheat and meadow—the land is improving in producing power. All the manure from four horses, two cows, three pigs and the poultry is applied direct to the potato field. Plowing is ten inches deep, and other preparation very thor-



Fruit Trees 7½c

Why pay two prices for all kinds of nursery stock to cover agents' profits and bad debts, when we, by employing no agents and making no bad debts—selling for cash direct to the people at lowest wholesale rates—will save you half. Twenty-one years experience. 1,000,000 high class fruit trees, 50,000,000 strawberry plants. Special bargains in peach trees. Safe and cheap delivery anywhere in U. S. Catalogue free. Valuable book on fruit growing free to buyers.

Strawberry Plants

\$1.25 per 1000

Write to-day for catalogue. Mention this paper. Address
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APPLES, PEACHES, PEARs, CHERRIES, PLUMs, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

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A choice lot of young stock for sale; some young bulls ready for service and bull calves sired by DEKOL 2D, BUTTER BOY, 3D, No. 2, and SIR PAULINE CRADDOCK, whose breeding and individuality are unsurpassed.

Also a nice lot of BERKSHIRE PIGS, Biltmore and Filston strains.

Before buying, write us what you want. FASBITT BROS., Sylmar, Md.



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BRAUER CHEMICAL CO., 426 Postal Building. New York.

ough. Potatoes are planted in drills thirty-three inches apart, and about thirteen inches apart in the drills, using an automatic planter, which cuts, drops and covers the seed. The potatoes receive from twelve to fifteen cultivations, and about ten applications of Bordeaux, using 178 barrels of fifty gallons each. This keeps the foliage perfectly healthy.

In addition to the stable manure, the potatoes receive 1,000 pounds of a compound of South Carolina rock and high-grade sulphate of potash an acre. The formula is 8 per cent phosphates and 2 1/2 per cent potash. This is building up the land in potash.

The selection of seed is important. From 800 bushels, he picks out fifty bushels of the most choice, large, smooth, perfect-shaped tubers to plant on the best piece of ground, to grow seed for the next year. A second grade of 250 bushels is selected to plant the main crop. Sir Walter Raleigh's are grown exclusively.

The weight of the grain from an acre of corn is about the same as the weight of the cured fodder. Forty bushels of corn should weigh about a long ton, and the weight of the fodder will be nearly the same. There may be variations sometimes, but one can estimate very close to the weight of the cured fodder by arriving at a knowledge of the number of bushels of corn from each acre.

Prof. H. A. Surface recommends the following antidotes for some of the most common household pests:

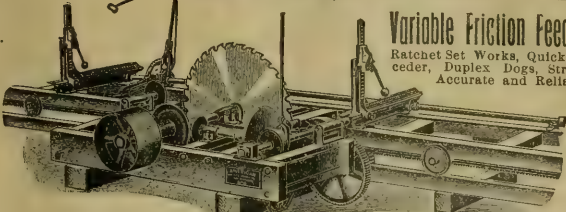
Ants; trace to the nest, which destroy with kerosene, benzine, gasoline or carbon bisulphide. Moisten sponges in sweetened water and dip into boiling water when covered with ants. Red pepper, powdered borax, walnut leaves, pennyroyal, cedar oil, oil of cloves, etc., scattered about infested places tend to drive them away.

Fleas; Clean all rugs used by cat or dog. Dust with hellebore or pyrethrum, close the room and sweep well, burning the sweepings. Beat carpets, and scrub floors with a three to five per cent solution of creolin or carbolic acid.

THE NEW AMERICAN SAW MILL

Variable Friction Feed

Ratchet Set Works, Quick Re-ceder, Duplex Dogs, Strong, Accurate and Reliable.



Best Material and Workmanship, **LIGHT RUNNING**, Requires Little Power, Simple, Easy to Handle, Won't Get Out of Order.

With 4 H. P. Steam or Gasoline Engine Guaranteed to Cut 2,000 Ft. Per Day \$150 Buys It on cars at factory, Freight's Very Low.

Seven Other Sizes Made. Also Edgers, Trimmers, Single Machines, Lath Mills, Rip and Cut-Off Saws, Drag Saws, Cord Wood Saws and Feed Mills. Catalogue Sent Free.

On January 31, 1905, W. H. Greenwood, of Bennington, Vt., said: "I am using your No. 38 Saw Mill with a 15 H. P. Engine and average 8,000 feet per day. I am very much pleased with your machinery."

AMERICAN SAW MILL MACHINERY COMPANY, 636 Engineering Building, New York, N. Y.
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**Fast Mail
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NITRATE OF SODA AS A PLANT FOOD.

No More Valuable Fertilizer and Tonic Known When Properly Used.

(Prof. A. M. Soule, Director Virginia Experiment Station.)

The true value of Nitrate of Soda as a plant food has now been well established. The chief trouble in the way of its more general use is its, relatively speaking, high cost. This is largely offset by its being so readily and completely available. Nitrogen is the most expensive form of commercial fertilizer that the farmer has to buy; therefore he should exercise the greatest discrimination in the application of fertilizers containing nitrate of soda, in particular, because of the fact that it is immediately soluble in water, and unless taken up by the plant roots it is likely to be lost through leaching of surface washing.

Nitrate of soda in its strictest sense may be termed a plant tonic or energizer, and this interpretation of its function should be kept in mind wherever it is utilized. It is not a complete fertilizer in any sense of the word, nor should it be applied as heavily as has frequently been advocated. Heavy applications of nitrate of soda have often given unsatisfactory results, and this coupled with its cost has led many persons to conclude that it is not a

satisfactory fertilizing material. In most cases from 75 to 100 pounds of nitrate of soda will constitute a very liberal application. In complete fertilizers for wheat and some other cereals probably 50 pounds is a sufficient amount to use. It is not uncommon to see applications of from 200 to 500 pounds of nitrate of soda advocated for these crops. Several years of experimental research by the writer have shown that these applications are entirely too heavy to give profitable results. Nitrate of soda should not be mixed with acid phosphate and potash and applied in the form of a complete fertilizer. Apply the nitrate by itself. It is also a serious mistake to apply nitrate of soda in the fall unless it is up and growing, and there is certain to be several months of growth before cold weather sets in. Of course, a small amount of nitrogen applied on the soil, or on early sown cereals or grass, is not out of place, but as a rule it is better to wait until the spring, until growth has set in, and apply the nitrate as a top dressing. Even then where 100 pounds is to be applied it will often be advisable to give it to the crop in two equal doses, say about a month apart.

As a stimulant and tonic to the plant, nitrate of soda is not surpassed by any known fertilizer, and it has often a remarkably good effect on soils that are deficient in other elements of plant food. This is accounted for by

its tonic effect, and not because it supplies phosphate and potash to the plant, as some people seem to think.

In trucking sections, nitrate of soda may often be used in heavier applications with profit, though as a rule a complete fertilizer, with nitrate of soda added, will be more likely to give satisfactory results than heavy applications of nitrate of soda alone. Even in trucking crops it is doubtful if more than 200 to 250 pounds of nitrate should be used even under the most favorable conditions. This amount may be used with safety where applications of a similar amount of phosphates are made. A very large per cent. of our soils are deficient in available phosphorus, a very essential element of plant food, as it has to do with the formation of grain, which accounts for the excellent results which frequently follow applications of nitrogen and phosphorus together.

If the soil is sandy, it will likely need potash salt, in which case a complete fertilizer should be used. This might appropriately consist, for trucking crops, of 200 pounds of nitrate of soda, 250 pounds of acid phosphate, and 100 pounds of some high grade potash salt, preferably a sulphate, though nitrate may be used to good advantage with muriate of potash as well. The phosphorus may be supplied from acid phosphate, Thomas slag, or even raw rock, though there is a good deal of contentions as to the real value of phos-

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Dunlop Flour, per barrel.....	\$3.00
Good Tea, Green, Black and Mixed, per pound.....	30c, 40c, 50c, and \$5.00
Obelisk Flour, per barrel.....	\$5.00
Granulated Sugar, per pound.....	5 c
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Choice Salt Pork, per pound.....	9c
Best Salt Pork, per pound.....	11c
California Hams, per pound.....	10c
Pure Lard, per pound.....	11c
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American Oats, per package.....	7c
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Cut Herrings, per dozen.....	8c
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Best Timothy Hay, per ton.....	\$1 00

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Brown Stuff, per ton.....	20.00
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Mackerel in Kits, per kit.....	1.00
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Table Peaches, per can.....	13c
Large Cans 1-1/2 quarts, 9c can or 3 cans for 25c.	
Small Can Tomatoes.....	6 c
Lump Starch, per pound.....	4c
Sardines, per can.....	4c
Best Feed Oats, per bushel.....	50c
Rice, per pound.....	5c, 7c, 8c
Ground, per pound.....	25c
Genuine N. O. Molasses, per gallon.....	60c
Porto Rico Molasses, per gallon.....	50c
Breakfast Bacon, per can.....	10c
Best Cream Cheese, per pound.....	15c
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Octagon Soap, per bar.....	4c
Huster Soap, 11 cakes for.....	45c
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Lenox Soap, 7 bars for.....	25c
Export Soap, 7 bars for.....	25c

Smoked Bacon, per pound.....	11c
Small Can Good Luck Powders.....	4c
Good Corn, per bushel.....	70c
Large Can Good Luck Powders.....	8c
Large Flugs Peach, Grape, Plum and Sun.....	10c
Cured Tobacco for.....	25c
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Old Crown Rye, per gallon, 5 yrs. old.....	\$8.00
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Pure Apple Brandy, per gallon.....	1.50
Good N. C. Corn Whiskey, per gallon.....	1.50
Five Year Old N. C. Corn Whiskey, per gallon.....	1.50
Blackberry Wine, per gallon.....	90c
Catawba Wine, per gallon.....	90c
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THE MANURE SPREADER.



THE IMPERIAL WAGON.

ROAD PLOWS, ROAD ROLLERS, WHEEL AND DRAG SCRAPERS GASOLINE ENGINES, CORN HUSKERS AND SHREDDERS, CANE MILLS AND EVAPORATORS, GRINDING MILLS for all purposes, CORN SHELLERS for hand or power.

We are sole manufacturers of the WATT, CROWN and CRESCENT Plows, made in sixteen sizes, and with interchangeable mould boards, adapted to every variety of work. They are sold on their merits and are guaranteed to give satisfaction.

DISC HARROWS with solid steel weight boxes. MOST DURABLE BEARINGS, with oil hole directly over axle, free from dust and clogging. ANTI-FRICTION ROLLERS, ADJUSTABLE SEAT, LIGHT DRAFT. Made in fourteen sizes.

ALL STEEL LEVER HARROWS. One, two or more sections. Teeth instantly adjustable to straight or slanting without stopping team.

STEEL RIM ROLLERS with SOLID STEEL HEADS, which keep the earth from getting inside the drum, making the roller absolutely rigid. Built in seventeen sizes, with one, two or three sections.

THE MANURE SPREADER doubles the value of manure by covering two acres instead of one by hand, and will do the work of ten men with forks. The lowest down spreader made, making it easy to load.



THE UNIT ROAD MACHINE.

Has but ONE WHEEL, and requires but ONE TEAM and ONE MAN to operate it. By actual test it has been demonstrated that with one man it will build more and better road than can be done by ten men with the usual tools. That it saves labor enough to pay for itself every two days when in use. FOR FARM WORK it has no equal for road work, cutting down ditch banks, opening drains, leveling and other purposes. THE PRICE brings it within the reach of all.



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COMBINED MILL and HORSE POWER.

BALING PRESSES for hand, horse or steam power, FERTILIZER AND LIME DISTRIBUTORS, HORSE POWERS, ENGINES, SAW MILLS, WOOD AND POLE SAWS, POTATO DIGGERS, FEED CUTTERS.

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Established by GEO. WATT, 1840.

THE CALL-WATT CO.,

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tion at the present time among phosphate rock as a fertilizing material.

When nitrate of soda is supplied to the soil, it is not advisable, as a rule, to put it on alone, owing to the liability of applying it equally. It may be used to advantage with a similar amount of dry loam, or sand, or even land plaster. Another advantage, resulting from the use of nitrate of soda, is its well known sweetening power when used on acid soils, and as many of our soils are inclined to become acid when cultivated for a series of years, this is a fact worthy of careful consideration.

POWER FOR FILING SILOS.

Use a Gasoline Engine and a Large Cutter for Economy.

The most economical power for running silo cutters is the gasoline engine. They require no regular engineer, but very little attention, are safe, and adapted to all kinds of work where power is needed. In purchasing such power it is well to secure one a little larger than would seem adequate for the present work at hand. It is always advisable to have a power a little too large rather than too small. The strain is not so great, its usefulness is lengthened, and in time of great hurry, and when more power is desired, it is

at hand without undue straining, and perhaps breakage.

What has been said of power applies in the case of the cutter. Many farmers have in the past sought to save money in purchasing small sized cutters, and have in nearly all cases found them inadequate, and have replaced them with machines of greater strength and capacity. A small cutter is continually overtaxed. More work is required of it than was intended by the manufacturer. The strain is too great and the wear rapid. The writer has had years of experience with cutters and the silo, and well knows the disadvantage of a small cutter.

A 14-inch cutter works very well, but an 18-inch is better. This is a good, practical size for all ordinary power, but if steam power is available, a 20 or 24-inch cutter is preferable. Our last venture was a 24-inch machine for steam power. This latter size has great capacity, and if power is ample will cut the bundles of corn as fast as two men can throw them onto the self-feeding table.

It is not advisable to buy a cutter smaller than 16 inches. An 18 or 20-inch machine is a good size, and adapted to any kind of power. If a large size is purchased at the outset, the one machine will last a great many years, and the necessity of selling a cutter for what it will bring because it is too small will be obviated.

It is best for each farmer to own a cutter. They are heavy things to move about from farm to farm, and a company machine usually does not receive the best of attention, as it does not seem to be anyone's business in particular to look after it, and some silos require longer carriers than others, making it necessary to readjust the machine somewhat, which is apt to cause delay and breakage. When a good machine is properly located and adjusted for the work required, it should not be used for filling other silos.

F. H. Chittenden, of the United States Department of Agriculture, recommends judicious rotation of crops as a preventative of the corn root-worm. It is partial to pumpkins and squash, hence these should be omitted from the corn field. When the beetle occurs on cucumber, squash, or allied plants, it may be combatted with arsenite.

There is always more or less loss in harvesting grain. If the field is enclosed with a good fence, turn the pigs in and let them act as gleaners, ringing them so that no damage will be done by rooting. If this is impracticable, chickens will repay in eggs the extra ration. All grains induce laying, buckwheat being especially popular. If they do not at first incline to eat it, boil a few messes. They will soon learn what it is.

The Most popular Machines in use for Peanut Picking and Grain Threshing are the

HEEBNER'S, LITTLE GIANT and PENNSYLVANIA

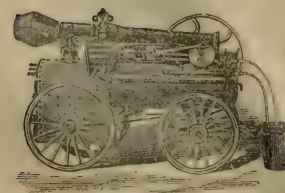
Machines, and they have splendid improvements for 1905. They are built in first-class manner, and are strong and durable. The price is within the reach of all. We guarantee them to do the work satisfactorily. We will mail catalogue and testimonials, and quote prices on application.

RUBBER, LEATHER
AND
GANDY BELTING,

"LITTLE
SAMSON"
Automatic
Engine.

FRICK'S "ECLIPSE"
ENGINES and BOILERS.
ERIE ENGINES and BOILERS.

THE CELEBRATED
"CHASE" SAW MILLS
AND
"DE LOACH" MACHINERY.



This cut shows our 5 and 7 h. p. "Little Samson" Vertical, Automatic Engine, for running threshers, peanut pickers, cutting feed-sawing wood, etc.
Larger size also furnished.

STRATTON & BRAGG CO., 31-33 North Sycamore St., Petersburg, Va.

INDIAN RUNNER DUCKS.

It has only been a few years since Indian Runner ducks were brought over from England, but in that time they have made friends for themselves. They are gray and white, or fawn and white, in color, the marking not usually being very regular. They are very quick in their motions, running rather than waddling like the common duck, and remarkably good foragers. They will start out in the morning and not come back until dark, and insects are very scarce where they cannot capture enough to fill themselves during the day.

Indian Runners have been called "the Leghorns of the duck family" on account of the number of eggs they produce. One of these ducks will lay 120 eggs in a year, and they begin laying quite young, many of them laying at six months of age. Their eggs are pure white, and half way between the egg of the Pekin duck and the hen in size.

At full growth these ducks will dress about four pounds, and the young are coming into favor with city markets as broilers. They are not so noisy as Pekin ducks, nor do they require much water. It is necessary to keep them shut up in the morning until they have laid, as they drop their eggs anywhere when allowed to run at large until they become broody, when they steal a nest.

Farmers are taking to them very kindly, as they are profitable as egg layers, and do not fly over fences or scratch up garden or lawn when allowed liberty. If allowed to roam at will they are very little trouble, spending their time in the fields in search of insects, and it is a smart bug that gets away after an Indian Runner has got its microscopic eye on it.

Miller Purvis.

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BITS OF FARM NEWS.

New weeds, new insects, new diseases are constantly coming in our midst. The latest among the latter is hæmorrhagic septicæmia, which has just been discovered in a herd of cows at Edinboro, Pa., five fatalities being already reported. Death is said to follow within four days after the attack. It has been known in Europe for some time, but Pennsylvania and Minnesota are the only sections of this country which have ever had a touch of the disease. Veterinaries believe that the outbreak at Edinboro has been checked.

The University of Pennsylvania is said to have a cow which gives two quarts of pink milk twice daily. Dr. D. B. Fitzpatrick, who has investigated its chemical composition, attributes the phenomenon, not to the old superstition of "killing toads," but to the presence of a minute bacillus. This is said to be harmless and susceptible to cultivation, yet many who admire pink ice cream will doubtless be content with the old way of securing it, even at the expense of the cochineal bug.

The coyote, or prairie wolf, is increasing in the West, despite the warfare of farmers. Though not an unmitigated nuisance in that it is destructive to rabbits, gophers, rats and other injurious animals, its liking for farm animals counterbalances this in the eyes of the average farmer. It is essentially carnivorous, though, occa-

sionally eating cultivated or wild fruits and berries. Poisoning, trapping, and hunting are all employed. Fencing with meshes not more than six inches square (or better, triangular) promises to prove effective in protecting farm animals.

Numerous are the inquiries of late for milch goats, the Angora being a weed destroyer rather than a milk pro-

ducer. The Department of Agriculture has recently devised a plan for quarantining Swiss goats on an island off New Jersey for a time to prevent the introduction of the foot and mouth disease so prevalent in Europe. And cheese made from the milk of goats bids fair to soon be added to America's dairy products.

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Race record, 2:27. Bay horse by Eclipse 125; dam, Esther, dam of Expressive, 3, 2:12½; Express, 2:21, etc., by Express. Kelly represents the highest type of a trotter, having fine size and the form and finish of a thoroughbred.

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HINTS ON FARM WORK.

An Iowa mathematician has figured that corn yielding thirty bushels per acre will cost thirty cents per bushel; a yield of thirty-five bushels, twenty-two cents; forty bushels, eighteen cents; fifty bushels, fifteen cents; sixty bushels, thirteen cents.

The cleaner the stalls are kept the less bedding required.

The colt inherits its form, bone and disposition from its sire, and size, color and constitution from its dam.

Style is worth something in a horse, and is usually the highest priced quality he has. Even a draft horse is worth all the more by having good action.

As a rule, the greatest failure in the ice crop is in a failure to get enough of it put up.

Begin now to select the seed wheat and oats. Fan the grain carefully, taking out not only sticks and straw and chaff, but take out all small, immature and broken grains. Put on plenty of wind and blow all light grains. Such can be used for feeding purposes, but it should not be sown at all. One trial of this plan will convince the most skeptical.

In many places the roadsides are made so it is next to impossible to mow the weeds or grass which grow there. The grader cuts a steep bank near the fence and the telephone company occupies the remainder with large poles.

A friend of mine gets around the pole nuisance by making every sixth telephone pole a fence post, and lets his cattle graze up to them.

Professor Mumford, of the Missouri Experiment Station, says it requires about one-half as much grain to produce a given amount of gain on calves as it does on two-year-olds. It has been demonstrated many times that the most profitable age to fatten cattle is while they are yet young. In one of the experiments it was found that the profit for each thousand pounds in calves was \$31; for yearlings, \$27; two-year-olds, \$19; and for three-year-olds, \$12.80.

MANAGEMENT OF MOWING LAND.

Discussing the use of fertilizers for grass lands, Professor Brooks, in the May crop report of the Massachusetts Board of Agriculture, says, that on most farms the barnyard manure can be used to better advantage on the tilled fields than on the mowings. Of the commercial fertilizers nitrate of soda is the most valuable for increasing the growth of the grasses proper. About two hundred pounds per acre is as much as it has been found profitable to apply. It may be applied alone with good results, but it seems best to combine it with some substance to give bulk, which is not too expensive and

which will supply potash and the phosphates.

Basic slag meal, which can be purchased at about \$15 per ton, is recommended, using from three hundred to five hundred pounds of the meal per acre, with 150 to two hundred pounds of the nitrate. Professor Brooks adds that it is possible to grow good crops of the clovers without manures or fertilizers supplying nitrogen, and gives the kinds and quantities that have proved most profitable on the college farm. Lime is frequently necessary in order to bring our soils into a condition that will allow the clovers to thrive.

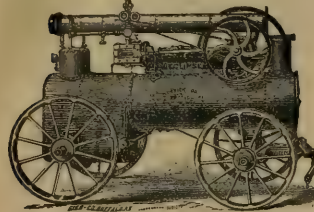
There is a tendency to unevenness in mowing, the result of frost and other agencies and occasional rolling is recommended. In the case of non-sod-forming grasses condition may be better maintained if some seed is occasionally sown. Great care should be used in purchasing grass seed to secure that which is free from troublesome weeds. When weeds obtain a footing reseeding is likely to prove helpful, the best results being obtained by ploughing in midsummer, harrowing repeatedly until into August, then enriching liberally and reseeding.

Tie sticky fly paper around boot tops and walk slowly through the room. Fleas jump at such moving objects.

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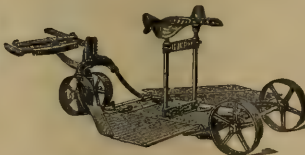
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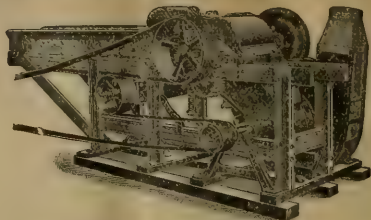
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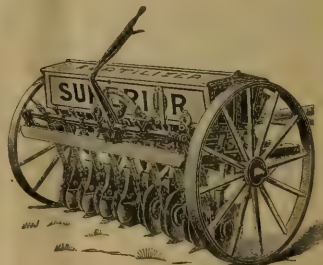


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Has steel gears and steel clutches and rolls easily. Adjusted to all conditions of corn WITH BLOWER OR CARRIER. Manufactured in 5 sizes; Large machines for threshermen and small machines for farmers' own use.

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The above parties will cheerfully give you testimonials as to the merits of the MILWAUKEE. We are ready at all times to go in the field with any other husker made, and will guarantee the MILWAUKEE TO BE THE BEST MADE; and will also guarantee it to do more work than any other made, and SHELL LESS CORN, AND COST LESS FOR REPAIRS and last longer. Write the parties that are using them; also write for special circulars and testimonials we have, which will be sent with pleasure.

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PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,
TRUCKING, LIVE STOCK AND THE FIRESIDE.

Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

66th Year.

Richmond, Va., November, 1905.

No. 11.

Farm Management.

WORK FOR THE MONTH.

The month of October has been up to this writing (20 inst.) an ideal Southern fall month, if anything too warm, most of the time for the season of the year. Whilst there have been several frosty nights yet at no time has the temperature fallen so low as to do more than cut the more tender vegetation like cow-peas, sweet potatoes and snap beans. It has never been severe enough to brown the pastures and these are still green and full of good grazing except in the mountains of the West. Probably never before have stock had a longer and finer grazing season in the South than this year. Even in the height of summer when pastures usually become brown and burnt in the South for at least a time the showers were so plentiful and widely distributed as to keep a green face on the land all the time and stock have done wonderfully well and should go into winter quarters in fine condition. The same seasonable weather has resulted in a great growth of forage crops of all kinds and feed is therefore abundant for the winter wherever proper care was taken in sowing forage crops at the proper season. The fine weather of October has enabled these crops to be harvested and saved with a minimum of labor, and in fine condition for keeping during the winter. As usual, however, we yet see many of these crops and much of the corn still in the fields. This ought not to be after such a fine fall month as we have had. It is unaccountable to us why farmers will so neglect the crops which they have labored so hard to produce. After the fine time we have had there ought to be no crops

left in the fields now to waste and spoil in the cold, damp weather, which we may now expect to have. It is true that the corn crop is a large one and necessarily takes much time to shuck and clear out of the fields, but there has during the month of October been so little interruption to work that most of the crop ought now to be housed and yet in many sections a very large part of it is still in the field. We would urge that attention be at once given to this work and the fields be cleared. The conclusion of the crop season has been so fine that even in the North West the proportion of corn injured by weather is very small indeed and the country can now rejoice in the greatest corn crop ever raised. The average condition on the 1st October was over 89 as against a ten year average of 80. Probably the total yield will be in excess of 2,600,000,000 bushels. Notwithstanding this enormous yield the price keeps firm and the indications are that corn is going to sell well all through the winter. Today (20 October) it is ten cents per bushel higher in Chicago than it was a year ago, and it is selling here at from 61 to 63 cents per bushel. There is likely to be a large export demand for the crop unless the price should keep very high whilst home consumption is going to be large. The only factor likely to prevent the price of corn from keeping high is the large crop of oats which grain is when abundant made to take the place of corn largely in the stock ration. The conclusion of the Spring wheat harvest was marked by unsettled weather and this no doubt considerably decreased the yield of this crop. Taken together the yield of winter and Spring wheat is probably something over

650,000,000 bushels, some estimates go so far as to place it at over 700,000,000 bushels. It is not a record crop though still a large one. The price keeps firm and will, we believe, advance rather than go lower. There is going to be a continued strong demand from Europe for wheat as the crop there, outside England, is not large. Russia usually a large exporter of wheat is not going to be able to send out anything like the usual quantity of wheat and this deficiency will have to be made good by this country and Canada, and this must necessarily tend to harden the market.

October has been too warm for the seeding of wheat in the South if danger from injury by the fly was to be guarded against. We may now expect cooler weather and the seeding of wheat should be pushed with all the speed possible. Many farmers complain that the soil is too dry for seeding. We would strongly urge that this be not allowed to interfere with the work. The old adage common in the old country "Sow in dust reap you must" has been almost invariably proved true. Last fall was a very dry one in the South and largely so throughout the country, and yet the crop this year throughout the country is a larger one than reaped for many years past although many of these crops were seeded in land well supplied with moisture. We had numbers of farmers to tell us this year that the wheat sown never was seen above the ground until the new year, and then was very weakly looking and yet at harvest the crop was a good one. The great point to be attended to is perfect preparation of the land before seeding, and to secure this even at this time of the year, it is well worth sacrificing a weeks time. The great cause of the light yields of wheat which are so common throughout the South is inadequate preparation of the soil, neglect of liming the land and thus securing luxuriant growths of the leguminous crops and a consequent lack of humus in the land. These and not more fertilizer are what are needed to secure as good yields in the South as in any other part of the country. To be content to go on making a yield of 10 or 12 bushels to the acre which is above the average yield of the Southern States is sheer folly and waste of time and money. No such crops can result in anything but loss, even with a high price per bushel. Wherever leguminous crops are being grown and their success ensured by the application of lime, and the land is well prepared by early plowing and repeated working of the land for a month or six weeks before the seed is sown, yields of from 25 to 30 bushels of wheat to the acre are being made. We have had numerous reports substantiating this.

The South ought at least to make all the wheat needed for the support of her people and can easily do this without greatly increasing the average area seeded in wheat and without expending one dollar more for fertilizer for the crops. When the land has been as well prepared as possible giving a firm subsoil with a dust mulch of 3 inches of fine soil on the top then drill in the seed or sow broadcast at the rate of 2 bushels to the acre except on rich land where 1 1-2 bushels will be an ample seeding. Sow only the cleanest and plumpest seed. Blow out all shrivelled and small grains and all the weed seeds. In this issue will be found articles dealing with the selection of wheat for seed and reports from two or three experiment stations giving the yields of different varieties of wheat tested at those Stations. We do not advise that new varieties of wheat should be seeded for the main crop in any section as it is always doubtful how far they are likely to succeed the first year. They should be tested experimentally on an acre or two the first year and seed be sown of a variety which is known to do well in the section for the main crop. Sow an early maturing variety as this is more apt to escape damage from rust than the later ripening ones. Both Fulcaster and Fultz are early maturing varieties and though they are not the largest yielding varieties as shewn in the tests published in this issue, yet both stand well in comparison with the others, and both are known to do well in the South. Fulcaster we regard as one of the best varieties of wheat grown and have known some most excellent yields made of it in this State. In recent issues we have fully discussed the question of the fertilizer to use on the wheat crop and to these issues refer our readers. Phosphoric acid and nitrogen are the main requirements of the crop, but we are strongly of the opinion that the best time to apply the nitrogen is in the spring after the crop has commenced to make growth and that it should then be applied as a top dressing after harrowing the crop, in the form of nitrate of soda, say at the rate of from 75 to 150 lbs to the acre. If bone be applied either alone or in connection with acid phosphate to supply the phosphoric acid needed by the crops, this will give a sufficiency of nitrogen to start the growth and if the crop be sown on a pea or clover fallow these will give an abundant supply of nitrogen for the fall growth. After seeding the wheat see that sufficient water furrows are opened across the fields to ensure quick drainage from the surface, of all heavy rainfalls. Wheat is very susceptible to injury from water standing on it.

Rye or Rye and Vetches may yet be sown for a

cover crop and to make winter and early spring grazing. These crops withstand freezing better than any other and make good grazing and the Rye and Vetches make good hay upon which cattle do well. They are also excellent crops for sheep and lambs and where this stock is kept should be saved for them as upon this grazing the lambs will be safe from the stomach worms and other parasites. Sow 20 to 25 lbs of vetch seed with a bushel of rye, or if sown in this month a mixture of rye and wheat in equal parts.

See to it that all crops now in the fields are got under cover as soon as possible. We cannot expect this delightful weather to continue indefinitely. Much loss is caused on every farm every year by negligence in storing the crops as soon as they are ready to house. It is pleasant work hauling home and storing crops when they are dry and the land is dry and firm for hauling on. After the rains and frosts have come the work is both tedious and unpleasant and much damage is done to land by hauling over it when wet and soft. It is punched into holes and these hold water all through the winter, making the land sour and unproductive. Especially is it important that all corn fodder should be hauled home as soon after it is thoroughly cured as possible. It is then very valuable as feed, containing as it does nearly half the feeding value of the whole crop. After it has remained in the field into the winter, and been soaked with rain and snow, and then dried or partially dried again, it loses much of its feeding value and is largely wasted by the stock. We long to see the day when every stalk of this fodder shall be run through the shredder and be packed away in the barn in a compact heap, where it will complete its cure and come out almost as valuable for feeding stock as timothy hay and in such a convenient form for handling and feeding that even if labor be scarce the feeding of the stock can be done with comfort and satisfaction. Many of our friends already shred all their fodder and we have most satisfactory reports from them as to the results from feeding the same. In addition to the much higher food value of the fodder when thus saved and stored, is the greatly enhanced value of the waste made in feeding the fodder. This when shredded becomes much more capable of absorbing the liquid voidings of the stock which are the richest portion of those voidings in plant food, and the finely cut waste becomes thus much more valuable as manure and is also more completely intermixed with the solid voidings, and thus more of it is returned to the soil to increase the humus so much needed to restore fertility. Morally, it also serves a good purpose thus to cut it, for who on the

farm has not heard and shuddered at the remarks made by the hands when tugging at a heap of corn stalks and dung in loading the stuff into the wagon and every now and again being struck in the face with an old tough corn stalk breaking loose from its surrounding mass of filth. These old corn stalks when thus put on the land serve but a very small purpose in supplying humus and are long in doing the work. We hope that ere long we shall see the shredder and husker as common as the threshing machine and hauled around from farm to farm, thus enabling every corn grower to utilize to the fullest extent the corn crop on which so much time and labor is spent. The whole cost of producing a corn crop ought to be got out of the fodder, and can be by means of the shredder and husker.

Have all the root crops, except Rutabaga turnips, dug or pulled, and stored either in cellars or in piers or clamps well covered with straw and earth to keep out the frost and convenient to the stock for winter feeding. Dig or pull only when dry and the soil will then not cling to them and they can be stored in a proper condition for feeding. Let them lay out in the mild sunshine for a few hours after being pulled or dug to dry and then haul from the field, first cutting off the tops without injuring the roots. The tops of turnips, mangold wurtzels and beets can be fed to young stock in the fields but should not be given to milking cows as they are apt to taint the milk. Rutabagas may be safely left in the ground until December. They will increase largely in weight during the cool days of November, and are not easily hurt even by a sharp frost, though they should not be stored when frozen at all. Let them thaw out and dry before storing. Every sheep keeper should try to have a store of turnips, mangold wurtzels or beets laid by for feeding to the ewes when suckling the lambs in the early spring. They are more valuable for this purpose than any other to which they can be put, though they make excellent feed for stock of all kinds. The superior feeding capacity of English sheep and cattle is largely to be attributed to the fact that root crops make so large a part of their winter rations in that country.

Old hide bound pastures which have failed to make a good growth of succulent herbage may be greatly improved by taking them in hand now and giving them a thorough clean up of all old tough weeds and bushes which should be dug out and burnt. Then take a sharp, heavy harrow and run it over them lengthwise and across tearing them well to pieces. Rake up the trash and haul it off into the

stock pens and then give a dressing of 50 bushels of lime to the acre and leave until early spring, say March. In March run over again with a light harrow and sow a bushel to the acre of mixed orchard grass, Tall meadow out grass, Herd grass and Virgin-blue grass and 5 lbs. of red clover seed and brush it in with a brush harrow and roll.

When the teams are not otherwise engaged, keep them at work plowing land intended to be cropped next year. At this time of the year the land may safely be plowed a few inches deeper than it has been plowed before, and this ought to be done. The furrow should not be turned over flat, but be set on edge so that the new soil may become mixed with the old in the working of the land and thus all may become improved. The aeration of this new soil during the winter and the action of the weather upon it will make the plant food in it gradually available and thus materially improve the crop producing capacity of the land. Wherever there is a good subsoil of clay, if possible, have this broken with a subsoil plow or coultter and thus deepen the soil and make it pervious to moisture. This deepening of the soil will enable it to hold the rainfall and thus prevent washing of the land and ensure a supply of moisture for the growing crops all through the season. Land left unbroken all through the winter will largely shed off the water, and next summer will lack the moisture needed to support the crop. The advantage of plowing land in the fall and winter is not half appreciated by Southern farmers as it ought to be. We have usually fine weather in which to do this work right up to the end of the year and it ought not to be missed. Work in the spring is pressing enough to be relieved all possible by using the fall and winter for some of it when this can be done. Our Springs are often showery and much time is frequently lost waiting for the land to dry and then before the work can be done the hot dry weather sets in and land becomes too hard to plow. All this trouble may be largely avoided by utilizing the time now and during the following month. Rye may be sowed on the land plowed this month and will make a cover crop for conserving fertility and a green crop to be turned down in the spring. Whether this be done or not plow the land. What all Southern land most needs is better and deeper tillage. One shallow plowing is all that most of it gets. This is not sufficient to make the most plant food available for the crop. Until more work is put on the land we shall never see the best crop producing capacity developed.

which stock is to be housed are put into good weather-proof order and limewash thoroughly. It is useless to house stock in buildings through which the wind whistles and the rain leaks. They are as well off, perhaps better, under the lee side of a fence or building. A great part of all they eat in such buildings will be wasted, simply used to keep up the animal heat without in any way improving the condition or yield. Feed is too valuable to waste in warming buildings and barn yards.

Make provision for storing manure where it will not catch the droppings from the roofs or be washed by floods. Let it be put on a place with a solid clay foundation sloping from all sides to the centre and thus capable of conserving the liquid draining from the manure, and if possible, cover with a roof to keep off the rain. Throw the manure from all the animals into one heap and mix together and put up compactly. This will prevent overheating and fire fanging and thus preserve the plant food in the manure. This manure pit should only be used when it is not possible to put the manure directly on the land from the stables. As far as possible haul out the manure as made, it will not waste spread on the land and it is thus most economically handled.

IMPROVING WHEAT BY SELECTION.

Editor Southern Planter:

Much has been said and written on the subject of seed selection, and great claims have been made regarding the increased yield from the use of large and plump grains of wheat. It has been thought that the farmer could easily increase the yield of wheat by simply selecting out choice, large heads for a few years. This is true to a limited extent; but after several years of careful selection at the Station, it is evident that in order to improve a variety by selection from the head, the work must be very carefully done for many years, and it is believed that there are comparatively few farmers who will be sufficiently accurate to do this kind of work satisfactorily. To select as indicated simply with a view of increasing the present yield would hardly pay for the labor and expense involved. The Station can do the work to better advantage and save the farmer much annoyance. On the other hand, it will often pay the farmer to select from the head as indicated to keep his wheat pure and vigorous; in other words, to maintain or increase his "standard." The importance of this kind of selection can not be urged too strongly on the farmers, for the result will fully justify the trouble involved.

See to it that all buildings and sheds in

Selecting out the large grains by means of sieves is probably the best method for the farmer to practice in keeping up the yield and improving the quality of his wheat. No good farmer will neglect to look carefully after the grading of his wheat, for the largest and plumpest berries always give the best results. These berries are produced chiefly by the large and medium heads. If this simple method is followed systematically, the yield and quality of the wheat can no doubt be increased. The improvement may possibly be rapid the first year or two, but for several years afterward will be hardly perceptible. The slow improvement has led many farmers to believe that the practice is not a profitable one, although it does prevent varieties from running out and lessens the necessity of purchasing new and untried varieties at big prices. It has not appeared from trials made at the Station farm that much larger yields are obtained from large grains, than from well graded commercial samples of wheat. The comparison usually made is between very small grains and very large grains, but this is hardly fair, since it rarely happens in actual farm practice that in a quantity of seed taken at random all the grains are either very small or very large.

The average difference in yield at the end of three years between large grains (607 per ounce), commercial sample (689 per ounce), and small grains (822 per ounce), with Mediterranean wheat, was 2.6 bushels in favor of large grains as compared with the commercial sample, and 5.18 bushels in favor of large grains over small grains. The difference in yield between the large grains and commercial sample chiefly occurred the first year; but it is possible, though hardly probable, that the difference was partly due to the variation in the soil. The experiment has been carried on in a different part of the field for the last two years, and the difference in yield is now only .32 bushel per acre in favor of the large grains. The farmer and the experimenter must remember that this kind of work, whether the selection is made from the grain itself, or from the best type heads, pays only when the work is carefully done and is carried on continuously without change for many years, or until a definite type is fixed. Many farmers are unwilling to take the extra trouble necessary unless they are assured of several bushels of increase the first year or so. This will seldom if ever be obtained with winter wheat, for it does not yield as readily to improvement as some other grains, if the variety is thoroughly acclimated and suited to its environment.

The yields of large and small grains from large, medium and small heads for three years were as fol-

lows: Of the large grains from medium heads, there were 626 grains per ounce, and 19.4 grains per head, and they made the largest yield, 32.68 bushels per acre. Of the large grains from large heads there were 596 grains per ounce, and 27 grains per head, and the yield was a close second, 32.37 bushels per acre, which proves that it is not so important to choose the very largest heads for this kind of work as has generally been believed. In fact, it is a mistake to make extreme selections, for the tendency in an abnormally developed product is both to vary and to revert. The progeny is not so vigorous as from the medium-sized plants or heads, and hence is more readily attacked and injured or destroyed by insects or fungous diseases. The quality of abnormally developed types is not as a rule equal to that of the smaller one, and it is more difficult to maintain; for, having been produced artificially, it must be maintained artificially. Selections from medium sized heads and plants are most likely to give satisfactory results. It would be unwise, for the reason set forth, to select from either the largest head or the largest stool. Observe that the largest head contains but few more berries than the shorter, more compact head, and that the grains are more regular in size and distribution in the medium head, which gives it better "balance." In view of these facts selections should follow the "happy medium" and so avoid extremes with their attendant ills.

The large grains have always had the advantage over the small grains in point of yield, although in some cases the difference was very slight. The average for three years is decidedly in favor of the large grain, except in the case of the small grains from medium heads, which yielded surprisingly well. There is a difference of 3.77 bushels per acre in favor of large grains from large heads, and 4.08 bushels of acre in favor of large grains from medium heads, over large grains; and 6.37 bushels per acre in favor of large grains from large heads, and 6.68 bushels per acre in favor of large grains from medium heads over the commercial sample. The increase in yield obtained to date would not pay for the labor involved in making the selections except for the fact that the Station is in a position to continue the work until vigorous plants have been produced of a well defined type. It might seem at first that the results obtained are unsatisfactory, considering the amount of work involved, but on close examination, it will be noticed that if large grains from medium heads are taken as a standard, all the selections from small grains, except small grains from large heads, show a decided difference in point of yield at the end of three years, as compared with the first year.

The question of seed selection is one of vital in-

terest to every farmer, and though results may come slowly, there is so much at stake that he should feel encouraged to grade his grain very carefully before planting, as he can surely increase the yield and do much toward standardizing the variety chosen for his locality. The more elaborate work may properly be left to the Station, but the sooner the progressive farmer comes to recognize the fact that he can produce his own seed to the best advantage, the better it will be.

Why has so much attention been given to studying the number of grains per head and ounce, and to the general characteristics of the varieties? First, because of the importance of varieties, and second, because of the necessity of standardizing them. It has frequently happened that varieties furnished the Station have proved untrue to name. In some instances there would be several distinct types of heads, bearded heads appearing among smooth wheats and bald heads among bearded wheats. It was thus evident that the varieties as grown by the farmers and as furnished by seedsmen were in many instances badly mixed and that we really had no fair basis for comparing them. In other words, we were testing something under one name when possibly not more than one-third or one-half of the grain reproduced belonged to the variety in question. In order to compare the varieties fairly it was evident that they must first be standardized, and so for the past two years an endeavor has been made to secure pure seed of the variety through selecting out 800 average heads from each plat by hand and threshing these separately. In this way the number of seeds per ounce as grown and the number per head has been obtained. The importance of standardizing varieties can not be urged too strongly as it is such a simple and inexpensive matter for the grower to obtain pure seed that the cost can not be offered as an excuse for not so doing.

It is a very important matter to standardize varieties for experimental work or else conclusions can not be fairly drawn from the investigations and it is impossible to cross-fertilize for the sake of improving varieties with the best results. This difficulty being recognized at an early date, the work of standardizing was commenced with two objects in view: first, to obtain pure seed so as to make the comparisons of varieties reliable; and second, to standardize the varieties and note their qualities definitely so that when it becomes desirable, as it will in the near future, to cross these for the sake of effecting certain improvements desirable in wheats for the South, we will know exactly what we are working with. Has there not been a serious mistake made in many instances in crossing wheat before the characters were

well established and thus getting results not truly representative of the varieties? Besides the importance of standardizing the variety for cross-fertilizing, is it not a matter of grave importance to have it pure, so that it may be tested through a series of years and its real qualities determined. Is it not possible through the standardizing and careful selection of a variety to improve its qualities very materially, and will it not be an important and interesting thing to be able to compare the standardized varieties with the cross-breeds which may be obtained from them in later years? The author believes this to be a very important matter, one of much greater moment in fact than seems reasonable to assume at first. There is sometimes a tendency to try every new variety for a year or two and then rush into cross-fertilization extensively before determining what is the best to work with. As a result hundreds of cross breeds are unsatisfactory and not so valuable as well established varieties, which may be improved through standardizing.

ANDREW M. SOULE.

Virginia Experiment Station.

WILL IT PAY TO HOLD CORN.

According to information just collected by the Missouri Agricultural College, the farmer who puts his corn in a crib to hold it for better prices can count on a loss by next June of at least fifteen per cent. That is to say, leaving out of account the cost of handling and loss by waste, thirty cents a bushel for the crop now is better than thirty-five cents next spring.

This conclusion is based on the reports of careful experiments covering seven years and extending over a large part of the Mississippi Valley. At the Iowa Station, for example, seven thousand pounds of corn were husked and stored October nineteenth, in a crib built upon scales in order that the weight might be taken without disturbing the natural condition of storage. There was a shrinkage of nine per cent. for the first quarter year, five per cent for the second, three per cent for the third, and two and five-sevenths per cent for the last quarter. The experiment was conducted under the conditions that normally exist in this section of the United States and the results may, therefore, be taken as typical of those that will obtain on the average Missouri farm.

The Missouri College of Agriculture, however, does not advise farmers to sell their corn, but to feed it to some class of animals, thus returning as much of it as possible to the soil. Careful estimates show that where corn is fed, eighty-five per cent of it can be sent back to the field to preserve its fertility. Sel-

ling the crop means taking this eighty-five per cent from the farm and thus, needlessly, reducing its fertility.

A GOOD EXAMPLE.—ALFALFA GROWING.

Editor Southern Planter.

As I have moved into the city to live, will ask you to please send the Southern Planter for the balance of the term, for which I have paid, to a relative of mine, James L. Cooper, Tenn. He was for many years a bill clerk, and afterwards book-keeper, for a large wholesale house in Nashville, Tenn., but on account of his health, he decided to move to the country, and before going, bought one registered Jersey cow, for which he paid a fancy price, also one standard bred trotting mare. He was in our city a short time ago, and stated to me, that he then had on his farm, (140 Registered Jersey females, all of them descended from the one cow, and besides, he had sold a great number of males and females, from the same stock. He stated that he had sold this year, \$1,000 worth of Jerseys, and would like to join in a sale this Fall if they could get one up in his vicinity, as he had quite a number, he would be glad to sell. He also has his farm well stocked with work animals, all descended from the one mare, which he purchased. I will also say, that he has only bought the choicest males, buying no females, and in this way, has improved his stock, and has kept up with the demands of the country, for fashionable strains, keeping only in his herd the very choicest of his animals. He told me also, that he could sell in the city nearly, every particle of milk, and butter, that his herd produced getting a good price for the same. You can readily see, that by keeping such a large herd of Jerseys, his farm is improving every year. I think this is a fine record, and shows plainly, what a man can do, if he will start right, and keep only pure bred animals, of his own choice, adapted to his locality. I have recommended your paper to many of my friends, and consider it by far, the best Agricultural and Horticultural paper, I have ever read, and consider that it has been a great help to me, and would be, to any man, who will *think and read*, and who wishes to improve himself, and his farm. You have done great good in advocating the sowing of Alfalfa. I am well satisfied that it is one of the best forage, hay, and pasture grasses that can be grown, on any farm, and is well adapted, especially to good rolling clay soils, on which water does not stand. I have succeeded best on lands of this kind, although have done well with second bottom lands, that overflow only every few years. My plan for obtaining a stand is to plow the land thoroughly, putting about 50 bushels

of lime to the acre, then sow in peas, and about the first of September cut off the peas, and disk the surface of the ground so as to get a good seed bed. Then sow broadcast, both ways, about 25 to 30 lbs. of seed to the acre, then roll thoroughly, and leave until Spring, when if I have not a good stand, I disk again both ways, and sow about 10 or 15 lbs. Alfalfa to the acre, *favoring the places where it is thinnest, on the land.* I have never tried inoculation, and in fact, have succeeded much better than my neighbours who have inoculated, and am satisfied that many good farmers are deterred from attempting to raise Alfalfa, on account of the great mystery, thrown around the sowing of Alfalfa, by the inoculation plan. I believe that good deep plowing, with 50 bushels of lime to the acre, and following peas without plowing the ground after the peas are cut is by far the best way to get a good stand of Alfalfa.

JACOB L. THOMAS.

Knox Co., Tenn.

LIME AND ACID PHOSPHATE.

Editor Southern Planter:

Some object to applying lime and acid phosphate to land at the same time. It is claimed that the Mono basic phosphate of lime in the "acid phosphate" would be changed back to tribasic phosphate by the action of the lime and as this is not soluble in water it is no more assimilable by plants than the tribasic phosphate of the fossil before treatment with sulphuric acid. Of course plant food of any kind in solution is most finely divided and distributes best. But who has proved that plants assimilate their food only in a soluble form? It by no means follows that because the fossil and the reverted tribasic phosphates are identical chemically, they are otherwise alike. The arrangement of their molecules may and most likely is not the same. Coal, graphite and diamonds are the same for certain chemically. The reverted phosphate has a vastly finer sub-division of particles than any amount of grinding (as with "floats") could do for the fossil phosphates, hence a vastly greater amount of surface for the roots of plants to act upon. However, so much for theories. Let us look at the question from another side. All soils are acid, alkaline, or just neutral. Yet acid phosphate is used indiscriminately here and elsewhere, in fact all the civilized world over, wherever available, Phosphoric acid is lacking in soils. Where I lime the soils are acid, and acid phosphate is a veritable elixir of life to crops, and in the parallel valleys north of mine the soils are highly calcareous, yet acid phosphate is just as much prized there. I

know we used dissolved bones (superphosphate) as a manure for Swede turnips (*Ruta bagas*) in the old country on limestone gravel soil, so rich in lime that it would froth like soda water when treated with sulphuric acid. No one would think of applying lime to land as heavily as Nature had done it there. Yet the results were most satisfactory.

JOSHUA FRANKLIN.

Clay Co., Ala.

THE VALUE OF OXEN FOR FARM WORK.

Editor Southern Planter:

I can remember when every farmer in this part of Pennsylvania kept a yoke of oxen for doing all kinds of farm work, and lumbering, and but few kept any horses. Farms generally were new, and the fields, excepting the flats along the river, had but lately been cleared, and were full of stumps, and stones, so that oxen owing to their cooler temperament, and patient disposition, made much the hardest, pleasantest, and cheapest team for ordinary farm work. For lumbering, skidding, and drawing logs out of the woods, and getting up wood, they are much handier, and pleasanter to use than horses. They will wade through brush heaps, and get around in the woods over logs and rocks, much better than horses. They are not so nervous, do not become frightened if they sink to the knees in mud, but with calm stolidity they wade through, and draw the load if possible.

Except in the very hottest weather, oxen will do as much plowing, harrowing, or drawing in hay, or grain, as horses, and do it on much cheaper feed. A good yoke of young oxen will plow an acre of sod ground, or two acres of stubble in a day without other feed than a good pasture field at night, and a feed of cut hay, moistened, and mixed with a little meal, as a baiting at noon. I have seen a yoke of oxen, and a pair of horses plowing on the same land, each team drawing its own plow, and the oxen kept close up to the horses all day, and did not seem to be greatly fatigued at night. Oxen of the Hereford and Short-horn breeds are generally used in lumbering, where lumbering is the only business followed, and there is no doubt that where heavy cattle are required to move heavy loads the Herefords and Short-horns, can "fill the bill;" but lighter, and more active cattle are preferable for farm work. The oxen which were the most popular in this region when every farmer used them, were a deep red, with slender, long tapering horns, and undoubtedly descended from the Devons. In some parts of New England, where oxen are still kept for farm work it is said that the Devons are preferred on account of their intelligence, activity, and ambition.

An ox at five or six years of age accustomed to labor will endure as much hardship as a mule. I have frequently used a horse team, and an ox team together when I wished to plow sod ground deeply, and they worked together as well as two teams of horses, and the bovines endured the fatigue as well as the equines. The horses had three feeds of grain per day and the oxen but one—a feed of cut hay wet, and mixed with meal. They do not require expensive harness like horses. A good yoke, costing three dollars will last a life time without repairs. A good many farmers have more work to do at certain seasons of the year than can be done with one span of horses, doing it well, and getting it done at the proper season. The consequence is that their farms are not worked to their full capacity, or that the work is too hurriedly done, and presumably not well done. Other farmers in order to cultivate all the land they desire to, keep two teams of horses the year round, but with the exception of putting in the spring and fall crops, they have hardly work enough for one team in the summer, and not half enough for one in the winter. Under such circumstances, the extra team of horses will "eat their heads off" and be a loss to their owner.

Energetic farmers would like to raise as much from their farms as they are capable of producing, but they are aware that it cannot be done with one team, and are reasonably sure that it will not pay to keep two spans of horses. I am of the opinion that most farmers who have more than 50 acres of land would find it greatly to their interest to keep one span of horses, and a yoke of young, active, well broken oxen.

A yoke of oxen between four and eight years of age, where a horse team is kept, would do all the extra work on the farm on a feed of hay, corn stalks, and pasture, without any grain at all. At eight years of age, when they begin to grow sluggish, they could be sold to the butcher for money enough to buy a yoke of four year olds to supply their place on the farm. A span of old horses when they get past the period of profitable work, cannot be sold except for a pittance, and the only men who will invest in such venerable horse flesh belong to a class who would misuse, or half starve them. A humane owner is unwilling to sell a faithful old team to unmerciful men, and averse to shooting his faithful servants, and sometimes keeps them three or four years at a loss.

J. W. INGHAM.

LIMING LAND.

Editor Southern Planter.

Referring to your articles about lime, I am going

to write you with a free hand, and of some points that may lead to discussion. I lived sixteen years in Lancaster Co., Penna. Lime is not a fertilizer, it decomposes vegetable matter and prepares it for plant food. All of Virginia east of the Blue Ridge, has been farmed for generations, nearly all of the vegetable matter in the soil has been consumed, and little or comparatively none of it has been returned to the soil in the shape of manure. Lime acts well on all clay soils formed from shale. Near the Ridge it is not as well suited to the soil as plaster. In Penna. the general application of lime has been from 150 bus to 175 bus stone lime per acre. Land was not considered well limed until about 700 to 750 bushels had been put on, in three different years. It was put on plowed land intended for corn. As a rule the Penna. farmers consider it a moral obligation not to sell any long feed hay, straw or fodder, but to return it to the land in manure. Before planting tobacco, a crop of rye in full bloom is often plowed under. My farm here is situated on Turkey Run, rolling land, of soil formed from red and gray shale and clay. It needs under drainage. Deep plowing, 10 to 14 inches by the rule, has been a great improvement. The land had been worn out. In 1882 I limed one half of a field with 60 bus. of Riverton stone lime; the field had been plowed for corn. The result was miserable crops for four years. There was no vegetable matter in the soil for the lime to act on. Since then nearly all of the fields have been limed with 30 bus. stone lime to the acre, put on sod land, and the poorer parts manured. I am farming on a rotation of 5 years, corn, wheat and timothy hay two years, pasture one year. All long feed is fed on the farm. Manure hauled, either on wheat or sod whenever convenient. My corn crop this year without fertilizer on 60 acres, I think will average about 9 bbls (45 bushels).

If you will refer to the records of the U. S. Agricultural Department, from about 1825, you will note that the average wheat crop in Genesee Co., N. Y., Penna, Maryland, and the Western States that started in with 45 bus. to the acre, have all fallen off in the yield. In walking over a wheat field in 1878 in Lancaster Valley, I said to the farmer, "What is the matter with the wheat?" His reply "me no know, guess its done wheated out." The more intelligent farmers said we think the trouble is that we do no let the land rest in grass long enough. Some of your friends wish to test the matter. Let them take a few acres of poor grass land, cut the weeds down, and let them lie, top dress pretty well with manure, and put 30 bus. of stone lime over the manure. Lime works down as deep as the plow goes. I am under the impression that the roots of a heavy sod furnish

more plant food than any green crop turned in. Am I right or wrong?

Fanquier Co., Pa.

N.

Our correspondent is right in saying that lime is not strictly a fertilizer. Its beneficial effects are partially physical, partially mechanical and partially chemical. Physically it breaks down and makes available tough plant food in the soil. Mechanically it disintegrates a heavy soil and consolidates a sandy one. Chemically it makes the potash in the soil available, and more important than all other effects it makes the soil alkaline, and thus capable of becoming the home and breeding place of microbic life upon which the success of all crop growth mainly depends. A soil devoid of microbic life is dead soil and unproductive, however it may be fertilized. From this it will be seen that lime may be used with advantage even on soils largely devoid of vegetable matter, but in such cases it ought only to be applied in a light dressing say 15 to 20 bushels to the acre, just sufficient to render the soil alkaline. Where the soil is filled with tough vegetable matter it may be used in double this quantity with advantage. There is, however, no time at which it can be used in the heavy dressings formerly thought necessary and mentioned by our friend with profit or advantage. Nor should it at any time be applied at the same time as farm yard manure. As to the relative proportions of plant food in the roots and tops of crops, careful experiments have shown that with the legumes, clover, cowpeas, &c., about half the plant food is contained in the roots and half in the top. Speaking generally the advantage in turning down the whole crop is that you secure not only all the plant food in the crop but the vegetable matter contained in the vines or tops to increase the humus content of the soil. We however, do not advise such a course except where the soil is very deficient in vegetable matter. The vines and tops ought to be made into hay and the animal food content be extracted by feeding to stock and the manure made by the stock be returned to the soil. The taking out of the animal food content of the crop by feeding it does not largely reduce the plant food content found in the dung and urine. Usually about 75 per cent of the plant food content of any feed is found in the dung and urine after the animals have extracted the food value of the crop.—Ed.

THE FEEDING VALUE OF ALFALFA.

In experiments made at the Wisconsin Experiment Station it was found that the total of four cuttings of Alfalfa gave 32,376 lbs. of green feed, 10,800 lbs. of hay, 1,996 lbs. of protein and 288 lbs. of

fat per acre. The weight of green forage obtained was approximately 2, 3 and 5 times that of clover timothy, and brome grass respectively, and the proportions for hay were nearly the same.

The analyses also showed that alfalfa yielded nearly 3 times as much protein per acre as clover, 9 times as much as timothy and 12 times as much as brome grass, while the dry matter and fat were also greatly in favor of alfalfa. The average protein content in the alfalfa hay was 18.7 per cent, and in the green forage 6.4 per cent, while clover contained 13.28 per cent in the hay and 4.47 per cent in the green forage, timothy 4.47 in the hay and 2.17 per cent. in the green forage and brome grass 6.7 per cent. in the hay and 2.7 per cent. in the green forage. These figures should cause a redoubling of the effort to grow Alfalfa on our farms. Protein is the main element required to secure growth of bone, muscle, strength and size in the animal, and these by the use of Alfalfa as a feed can be secured more cheaply than in any other way, whilst when this is secured fat can be quickly placed on the frame thus built up by the use of corn. To the Dairy farmer protein is of essential value in making milk and by the use of Alfalfa as a feed the need for buying bran and cotton seed meal can be avoided and better results be obtained at less cost. *Grow your Protein and do not buy it.*

MR. CLARK'S GRASS AND ALFALFA EXPERIMENTS.

Editor Southern Planter.

Herewith is my grass and alfalfa report of this year's crop. Timothy and red top on 11 1-8 acres, was first crop 116,121 lbs. 58 tons; and second crop on 7 acres 35,010 lbs. The value of which at \$15.00 per ton with all cost deducted gave a profit of \$68.00 per acre. My 7-8 acre field now seeded 16 years cut this year 20,560 lbs., over 10 tons. Total in 16 years, two crops each year, a little over 135 tons. I think that yield most remarkable. The 16th year after seeded over 10 tons of well dried hay in two crops. The relative stand of timothy and red top is substantially the same as when first seeded.

I promised my friends to tell them what I know about the production of alfalfa. The scientific men say that to prepare and sow a field to alfalfa that 20 qts. of seed should be sown to the acre in the spring and when the plants are about 6 inches high they should be clipped. This clipping is necessary to check the growth and strengthen the plant. Clipping makes the plant branch out with new vigor. This treatment should be repeated several times dur-

ing the summer. Every clipping they say will strengthen the growth and should in no case be neglected. The neglect may mean failure. This clipping of the field the first season is not expected to be saved for hay.

After the first season alfalfa should be cut when 1-10 of the heads are in bloom. After each cutting if the ground is dry it usually will be well to go over the field with the disc harrow. This they say is practised by some of the best growers with excellent result. The discs must be set at a small angle so as not to cut off and tear out the plants. They say that by some this disking is done in two directions across each other at right angles.

The Experiment Stations say that to get the best results from alfalfa it must be cut at an earlier stage of development than red clover. A late cutting not only means poor quality of hay but it also is detrimental to the development of the next cutting so early cutting should be practised regardless of the weather. They also say the curing process must be carefully handled because the leaves soon dry and are easily broken off. The leaves are of more value pound for pound than good wheat bran. So much for the scientific men.

I have been using the Cutaway Harrows for resetting alfalfa along the west coast for a great many years. Those best acquainted with the production of that crop have decided it should be reset at least every third year and the best method is to sow about 10 lbs. of new seed to the acre then go over it with the Cutaway Harrow set at a light angle in both directions and split the heads of the old plants and reset with the new seed. By that means the crop can be produced continuously for a long term of years. My experience of course is not confined to my this year's experiments.

I am now going to tell you just what I have done. I took 3 1-2 acres of the very highest, driest and poorest section of my field, 100 ft. above the water line and intensely cultivated it with my double action cutaway harrow to the depth of 8 inches or more. Then I sowed 25 lbs. of alfalfa seed to the acre the 3rd day of June, also sowed 800 lbs. of high grade fertilizer to each acre. On the 24th of July, 52 days after seeding I cut and cured 10,760 lbs. of well dried hay, and on September 13th, I cut and cured 10,850 lbs. of well dried hay a total of 21,610 lbs. Almost 11 tons in 103 days from time of seeding. I can safely call it three tons to the acre of well dried alfalfa hay after all of the outs are deducted. While I would not advise others to go into the cultivation of alfalfa very extensively at first yet I think that there are many high and dry fields in New England

that could be utilized to good advantage in the production of alfalfa.

The first thing to be done is to intensely cultivate the field and kill out all kind of vegetation, then sow the seed with the land intensely cultivated giving the alfalfa the first, best and only chance. With my present knowledge I should say a good dressing of thoroughly decomposed vegetable manure adding a few hundred pounds to the acre of air-slacked lime except in sections where there was plenty of lime in the soil. I had no lime but a portion of the field had a little thoroughly decomposed yard manure and that section was best. I think the success I have obtained was due first to intense cultivation and second to the nitrates which were in the fertilizer sown but it would be well to remember that high grade fertilizer containing nitrates cannot be used after the plants come up. If I had sown my alfalfa the middle of April I think I would have easily gotten 5 tons of well dried hay to the acre this year and that would have been one year better than one would expect to get according to the scientific men and yet I think with the ordinary cultivation they are right. I would only like to add that I was unable to obtain the views of scientific men whose views are herewith set forth until after I had sown my seed.

I will repeat, first intensely cultivate your land, sow your alfalfa seed as early as convenient in the spring giving the land a thorough coating of decomposed vegetable manure with a little airslacked lime as before stated. If you can afford it before seeding put on three or four hundred pounds to the acre of nitrate of soda and cut it when 1-10 of the blossoms are in bloom. One word more, perhaps I ought to say that when I cut my first crop I immediately removed it to another field then I sowed 10 lbs. more of the seed to the acre and took my Double Action Harrow and set it at a light angle and went over the field in two directions. The final result is as above stated. It is now 16 days since the second crop was cut. We have had very heavy frost since the cutting and yet the alfalfa is still growing. It has made a further growth of at least 4 inches.

GEO. M. CLARK.

Higginam, Conn.

EXPERIMENTS IN WINTER WHEAT. GROWING AT THE OHIO EXPERIMENT STATION.

As the result of experiments made at the Ohio Experiment Station for 13 years with some 60 varieties of wheat the Station says:

1. Yield of grain alone being considered, the best ten varieties, in the order of their rank are: Gypsy,

Mealy, Early Ripe, Poole, Nigger, Perfection, Mediterranean, Valley, Currell's Prolific and Dawson's Golden Chaff.

2. Weight per bushel being considered, the ten varieties testing highest are: Hickman, Red Wonder, Fulcaster, Gypsy, Valley, Deitz, Currell's Prolific, Perfection, Nigger and Lebanon.

3. The ten varieties ranking highest in per cent of protein are: Velvet Chaff, Lehigh, Sibley's New Golden, Red Wonder, Lebanon, New Columbia, Fultzo-Mediterranean, Deitz and Buda Pesth.

4. Climatic conditions have much to do with the protein content of wheat. High temperature for the month preceding wheat harvest, results quite uniformly in decreasing the yield and weight per bushel but in increasing the per cent of protein. The latter is due to a shortage in starch content rather than any actual increase of protein.

5. Anything which tends to interfere with the normal development of the kernel, as rust, Hessian fly, or midge, tends to increase the percentage composition of the protein.

6. High protein resulting from seasonal influences or insect depredations is not desirable, as it is to be found more largely in the bran and other waste products than in the flour.

7. High protein as found in normally plump wheat is desirable. As a variety characteristic it is to be sought for.

8. Ranking the several varieties as to yield, weight per bushel and protein content, giving 60 points to yield, 25 points to weight per bushel and 15 points to protein content, the ten varieties scoring highest are: Gypsy, Early Ripe, Nigger, Poole, Mealy, Currell's Prolific, Valley, Red Wonder, Democrat, and Fulcaster.

9. Experiments in thick and thin seeding, covering eleven years' work, indicate that 8 to 10 pecks of seed per acre will give better results than a less amount of seed upon the somewhat worn lands of the State. At the Gerimantown test farm 8 pecks have given the largest yield.

10. In normal seasons, September 20 to 22 has proven the most satisfactory date for seeding in the latitude of Wooster, with September 15 next highest in yield.

11. Experiments extending over a series of 13 years have failed to show on the average any gain from the use of seed from which the small and light grains have been removed by use of the fanning mill although three seasons out of the thirteen the first grade gave largest yields.

12. In view of the possibility of an unfavorable season and of the fact that a more uniform seeding

can be secured by removing the shrunken, broken and extremely small grains, the Station would advise doing this, but would not hold out any hope that mere grading of the seed will produce a permanent improvement in wheat or any marked temporary advantage, one season with another.

13. The selection of large, as compared with small heads, does not promise much in the way of improvement.

14. Permanent improvement in wheat must be based upon the selection of plants as a whole, rather than upon parts of plants. Excellence due to hereditary influences must be distinguished from excellence due to environment.

In these tests Gypsy has made as high as 60 bushels per acre, Mealy 59 1-2, Early Ripe, 58 3-4, Poole 58, Nigger 57 3-4, Valley 54 1-2, Currell's Prolific 54 1-2, Fulcaster 50 and Fultz 48 3-4.

SOME FARM NOTES.

Hairy Vetch.

Editor Southern Planter:

In a pamphlet issued some years ago from our Experiment Station at Auburn, Ala., Mr. J. F. Duggur advocated the use of hairy vetch as a winter cover crop in connection with cotton. Had his advice been carried out, I am convinced the results would have been most gratifying. But there were great difficulties in the way, viz.: the high cost of the hairy vetch seed, say \$5.00 or \$6.00 per bushel, besides which they were often badly adulterated with dead seeds, so that I not more than 25 to 33 per cent. grew, thus bringing the actual cost up to \$15.00 or even \$20.00 per bushel. Added to this was the fact that the seed being imported arrived too late for fall, or rather late summer sowings. And as a half bushel or three pecks of seed are required to sow one acre, it will be seen that hairy vetch was a costly plant to use as a winter cover crop.

Some five or six years ago, Mr. Bellwood told the readers of the *Planter* of a crop of hairy vetch he raised which was very successful. No doubt the crop was inoculated by the partridge pea, which is such a common weed all through east Virginia. But Mr. Bellwood seemed to think that the seed his crop produced was inferior to the seed he sowed—that is my recollection of what he said. But according to my observation and experience, hairy vetch grown here will beat any imported from Europe in sprouting.

There is no race suicide about it. Four years ago I let a lot of it go to seed (it certainly was a beautiful sight when in bloom); since then, whenever that land is stirred, it never fails to show a good stand of hairy

vetch; this, too, notwithstanding about three-quarters of an acre of it has been enclosed and used as a vegetable and truck garden for two years, and positively not one vetch plant was allowed to ripen seed on it. Cold weather alone can keep it from sprouting and it is as sure as peas or corn in hot weather, be it wet or dry. In fact, it stands heat as well as the best. I don't think hairy vetch is a suitable plant to use in a rotation with wheat. But I am convinced that it may be a real boon to the cotton farmer in the way indicated by Mr. Duggur, because it can not harm cotton. Get the land once stocked with the seed and allow it to go to seed every few years and it will occupy the soil in the fall and winter after cotton is picked and thus add to the vegetable matter in the land and its stock of nitrogen, to say nothing of the fact that it would stop the washing of hillsides and the leaching of nitric acid from naked land during our saturating winter rains. In a word it would go far to both prevent and cure the causes which make our run-out fields what they are.

I would ask the readers of the *Planter* why some of them do not take up the raising of hairy vetch for seed. I am sure it can be made pay at a far less price than it can be bought for now. Besides the home-grown seed could be put on the market in July when cotton planters would need it to sow in cotton at laying-by time. From my recollection of the way partridge peas grew on the "low-grounds" of Gloucester County, Virginia the hairy vetch would do splendidly there. They are closely related plants and inoculate one another.

I believe there is a good opening here for enterprise, and were I young again I would try it in a minute. A few years ago I threshed out a lot of hairy vetch by trampling with horses. I sowed it in the chaff. But it was as nice seed as I ever saw; maybe a trifle smaller than European raised, but you know wheat and other plants do not grow such plump seed in this climate, yet they vegetate just as well.

JOSHUA FRANKLIN.

GARDEN SAGE.

In the October issue a "Reader" asked about cutting and curing Sage, to which we replied. We have a letter from a subscriber wishing to give "Reader's" name and address as he wants to buy the Sage. Owing to the printers' strike we failed to receive back our M.S. from the parties whom we had to get to set it in another State, the same having been lost; and, therefore, are unable to give the information. If "Reader" will send us his name and address we will put him in communication with the buyer.—Ed.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The harvesting storing and shipping of all the summer grown crops should have constant attention until the work is completed. As the ground is cleared of the crops rake up and burn all vines trash and weeds and thus destroy all fungoid spores and disease breeding germs, and the eggs and pupa of insects. Whilst all this trash would make humus in the soil if turned under and it is highly necessary to keep all garden and truck land well filled with humus yet diseases and insect pests are so especially fatal to garden and truck crops when once they get started in their work that it is worth while to sacrifice this humus making material in order to avoid any risk of infection of future crops and then to provide humus making material by sowing a mixture of Crimson clover, Hairy Vetch, Wheat, Oats and Rye upon the land to be turned under in the spring. Though late for seeding Crimson clover yet it is worth while to put some of the seed in the mixture, as on fairly good garden or truck land it will germinate quickly and being protected by the grain will probably much of it survive unless the winter be very severe. Before sowing the mixed seeds plow the land deeply and give it a dressing of 25 to 50 bushels of lime to the acre. This will correct acidity in the soil, and most truck and garden soil is acid from the large quantities of vegetable matter turned under necessarily, to keep up the productivity of the soil. The lime is also valuable as a means of preventing club root "finger and toes" and several other diseases especially affecting cabbages, turnips and other cruciferous crops.

Kale and Spinach may yet be sown for early spring though it is getting late for this work as unless the weather keeps fine and open into December the young plants are apt to be killed by severe weather.

Cabbages may be set out for the spring crop in the Eastern and middle sections of Maryland, Virginia, and North and South Carolina. It is not desirable that the plants should make much growth now but merely get good roothold of the land and commence to grow. If growth is too much forced the plants are very apt to be killed by the winter frosts. For this reason it is not wise to apply nitrogenous fertilizers except in small quantity at this time. Give well-rotted farm yard manure acid phosphate and potash liberally now, and in the spring apply Nitrate

of Soda as a top dressing. In our last issue we gave advice as to the setting out of the plants to which we refer our readers.

Celery plants should now be earthed up fully to blanch the stalks. Hold each plant compactly together, either with the hand or by tying a soft string around it and then pile up and press the soil closely around and cover all except the top of the stalks. These should be left bare until sharp frosts set in and then the whole bed should be covered with a good thickness of straw or dry litter. This is usually sufficient to keep out the frost from the plants and keep the soil soft enough so that the roots can be dug as wanted all through the winter.

Lettuce plants may continue to be set out in cold frames for winter and early spring cutting. See to it that the soil used for the beds is in a sweet friable condition and well filled with vegetable matter. The use of a mixture of well rotted farm yard manure and chemical fertilizers is better for this crop than either used alone. Never set out plants in the old soil left in the frames from last year or you will be very apt to be troubled with the plants damping off. Give air to the frames as long as the weather is mild.

Asparagus beds should have the old stalks and tops cut off and weeds pulled, and then be covered thickly with farm yard manure or other litter which will keep out the frost and improve the soil.

Strawberry plants may yet be set out in well prepared land. Do not set too deeply in the soil. Leave the crowns of the plants level with the surface and make them firm in the soil. Use Phosphoric Acid and Potash liberally in the fertilizer but do not apply quick acting nitrogenous fertilizers at this season. Cotton Seed meal, Tankage or farmyard manure may be applied now and Nitrate of soda in the spring.

Raspberries, Dewberries, and Blackberries may be planted out any time when the weather is mild from now until March or April. These bush fruits should be set in rows 4 or 5 feet apart, and for Raspberries 3 feet apart in the rows and for Blackberries and Dewberries 4 or 5 feet apart in the rows. Let the land be well prepared, but not made too rich as this has a tendency to cause excessive growth of canes and little fruit wood.

Old Raspberry and Blackberry bushes should have the old canes cut out and the new wood be thinned so as to not to leave too many canes to a root. These should be shortened back, say to 3 or 4 feet canes, and then be tied up to a trellis or to stakes

Orchards of apples, peaches and pears may be set out from this time until the ground becomes too hard frozen. We have always favored the fall planting of Orchards in the South. The land is then generally in an ideal condition for working, neither too dry nor too wet, and can be plowed and broken, and the holes opened with less waste of labor than at any other time, and work being less pressing now than in the spring time, care can be given to the plant ing out of the trees which it will be found they will repay. See that the rows of trees are set out in straight lines, and line well in every direction, and cultivation will then be easy amongst them. Do not use manure in the holes when setting out the trees but plant them in the soil taken from the surface and the fill up the holes with the bottom soil and mulch on the surface with manure.

APPLES ABROAD.

Latest cable advices from the principal markets in England are very favorable. All arrivals in good condition sell promptly and at very high prices, red varieties at prices that give nets of \$3 and \$4 a barrel here, with some extra fine Kings \$3.75 to \$5.50; Greenings, \$2 to \$3.25. Latest mail advices state that in London, Nova Scotia apples sold to give nets for Gravensteins \$3 to \$4.25, and Ribstons \$3.75 to \$5.50, with the demand very good. In Liverpool, New York Baldwins were selling to give nets of \$2.50 to \$3.75, Imperials \$3 to \$4.50, Kings \$3.75 to \$5.50, and Greenings \$2 to \$3.25. They continue to look for a very good demand for American and Canadian apples, and say after the 15th of October all markets will have to depend entirely on fruit from this side.

GEO. A. COCHRANE, Fruit Exporter.

Boston, Oct. 7.

PLANT FOOD CONSTITUENTS USED BY BEARING FRUIT TREES.

At the New York State Experiment Station, an investigation has been conducted to ascertain the plantfood requirements of different orchard trees and fruits. As we are frequently asked to advise as to the quantity and kind of fertilizers to be applied to orchards, the results ascertained in this experiment

will be found of great value to orchardists, and we here present the same. The trees investigated were apples, peaches, pears, plums, and quinces.

The following table shows the plant food used during a season's growth by a mature fruit tree in full bearing.

Variety.	Nitrogen. Lbs.	Phosphoric Acid. Lbs.	Potash. Lbs.	Lime. Lbs.	Magnes Lbs.
Apple	1.47	0.39	1.57	1.67	0.00
Peach.	.62	.15	.60	.65	.20
Pear.	.25	.06	.27	.32	.11
Plum.	.25	.07	.32	.34	.25
Quince.	.19	.06	.24	.27	.29

From this table it is seen that the relative proportion of the different plant food constituents are approximately the same for these different varieties of fruit trees. This means that under like conditions of soil fertility, a mixture of nitrogen, phosphoric acid and potash which would meet the requirements of one variety would also meet the needs of the other varieties so far as the supply of these plant food constituents is concerned. An acre of peach trees uses considerably larger quantities of plant food than any of the other varieties of fruit trees. The amounts of the nitrogen and potash required per acre in the case of the different fruit trees are practically the same, while the amount of phosphoric acid used is only about one-fourth as much as of nitrogen or potash. In respect to the amounts of plant food used per acre by the fruit of the different varieties of trees, the amounts of nitrogen, phosphoric acid, and potash in the different fruit trees are in the following order. Quinces use the most, and then follow apples, peaches, plums, and pears. Potash is present in the fruit in larger quantities than is any other plant food constituent, nitrogen comes second, being present to the extent approximately of one-half the amount of potash. Then follow in order—phosphoric acid, magnesia and lime. All of these being present in much smaller amounts.

In the leaves the plant food constituents used per acre are greatest in the case of the peach, the apple coming second and then quince pear and plum. Lime is present in the leaves and also in the new wood in much larger quantity than any other plant food constituents, nitrogen comes second followed in order by potash magnesia and phosphoric acid. In the new wood, the plant food constituents used per acre are greatest in the case of the peach trees after which come in order quince plum, pear and apple.

The tip disease of the raspberry is not new but is something more prevalent. Use the Bordeaux mixture on the canes just before the leaf buds appear. Cut out all affected cane tips and burn them, also the old canes immediately after the last picking and burn them also.

Live Stock and Dairy.

FATTENING HOGS.

It is now time for the hogs which are intended to be slaughtered in the early winter months to be gotten up from the pastures and be put on feeding rations. Except where the hogs are on cowpeas or peanut fields there is little to be gotten from the pastures now, which will do more than barely suffice for a maintenance ration and will certainly not make meat quickly enough to be profitably made. Even the hogs on cowpeas and peanuts will be better fed some corn, to help to hasten maturity and to make solid meat.

In connection with this question of feeding hogs for bacon, it would pay Southern farmers well to give heed to some lessons learned in experiments recently made at the Indiana Experiment Station. There, 16 crossbreed pigs were divided into 4 lots of 4 each, all the lots being as nearly equal in size, quality and weight as possible.

Lot I. was fed corn-meal alone.

Lot II. was fed half corn-meal, and half wheat middlings.

Lot III. was fed 2-3 corn meal, and 1-3 soy bean meal.

Lot IV. was fed 5-6 corn-meal, and 1-6 tankage.

The quantity of rations was varied, according to the appetites of the pigs in the different lots.

The results ascertained are summarized by the Station as follows:

1.—Soy beans proved to be a very valuable adjunct to corn, being the most efficient feed tested.

2.—Pigs fed a ration of one part soy beans to two parts of corn produced two and one-fifth times as much gain in the same time as did those receiving corn alone.

3.—It required 310 pounds of feed per 100 pounds of gain where one-third of the ration was soy beans; while it took 557 pounds per 100 pounds gain where corn was fed alone.

4.—Comparing the soy bean ration with the middlings and tankage rations the amount required per 100 pounds of gain stands—Soy beans and corn 310 pounds, middlings and corn 343 pounds, tankage and corn 330 pounds.

5.—Corn-meal alone was shown to be very inefficient as a pork producer.

6.—The pigs receiving a ration of 1-3 soy bean meal and 2-3 corn-meal produced 402 pounds gain. A ration of 1-2 middlings and 1-2 corn-meal produced 365

pounds gain. One-sixth tankage and five-sixths corn-meal produced 348 pounds gain, while a ration of corn-meal alone produced only 183 pounds gain. Stated in another way, corn-meal alone produced less than one-half the gain made by a ration of one-third soy beans and two-thirds corn; one-half as much as middlings and corn, and but little more than one-half as much as tankage and corn.

7.—Corn-meal alone impaired the digestive capacity of the pigs as shown by the feed consumed, which was 320 pounds less than any other lot consumed.

8.—The longer the pigs were fed on corn alone the more inefficient it became, requiring 1,219 pounds of feed per 100 pounds during the last week of the test against 500 pounds the first week, and an average of 557 pounds.

9.—Corn-meal alone produced poor appetites, light bone, deficient development in valuable portions of the carcass, and a general state of unthrift, as shown by the hair, skin and hungry look of the animals.

10.—The gains on pigs fed under the conditions of this test cost \$5.01 per 100 pounds, where corn-meal alone was used; \$3.44 with one-half corn-meal and one-half middlings; \$3.59 in the lot receiving two-thirds corn-meal and one-third soy bean meal, and \$3.71 where five-sixths corn and one-sixth digester tankage was fed.

In the face of this showing, Southern farmers who can so successfully grow soy beans and many of whom are now growing them, should utilize the beans for hog feeding, and arrange to grow them more largely in the future. They are splendid feed for all stock.

A VIRGINIA HERD OF PURE-BRED JERSEYS.

Editor Southern Planter:

Is the pure-bred Jersey a good cow for the Virginia dairy farm? This question has been asked me a great many times and for the benefit of those enquirers, I will state what nine pure-bred Jerseys did for me in 12 months.

From the nine cows I sold 1,611 gallons of cream, which netted me \$1,204.67. From this deduct \$160.00 for bran, cottonseed-meal, and wheat chops purchased and you will have \$1,044.67 left as profit; an average of \$116.00 per cow.

I do not take into account the cost of ensilage and rough food. I assume that the manure from these animals, together with the skimmed milk, which is fed

to the pigs and calves, will more than cover the cost of this. These cows came fresh at different times during the year and most of them were dry a portion of the time. These cows have a record of from 2 pounds to 3.60 pounds of butter per day.

A word as to the feeding, as this I consider one of the secrets in successful dairying and stock raising. My cows have bran twice a day, at milking time, the year round. Wheat chops or cottonseed-meal is fed with this a portion of the time. I feed peas and sorghum from about September 1st to December 1st, at which time my silo is opened and ensilage, corn stover and hay are fed until April; then rye and crimson clover are fed until about June 1st, at which time my cows go to pasture and remain until September 1st, when peas and sorghum are taken up again.

I am careful to keep a choice bull at the head of my herd. This I consider very important. I have now a son of the great St. Lambert's bull "Rioter of St. Lambert, Jr.," H. R. No. 56580, which is considered the greatest pure blood St. Lambert bull living. The dam of my bull is a daughter of the great St. Lambert Rinora, that has a record of 23 pounds 6 ounce butter in 7 days and 319 pounds 12 ounce milk in 7 days. With a bull of this breeding and such cows as are mentioned in the above test, I have no trouble in getting good dairy workers and in placing what stock I may have to offer, at a fair price.

The first and main point in a business of this kind is to decide what our object shall be, then breed for that particular thing. If we want milk for the retail trade, why take the Holstein, or some other deep heavy milkers, (and even then I think it would be well to mix in a few Jerseys). If we want cream or butter why there is nothing better for Virginia than the pure-bred Jersey. And I may add, if profit is what we want, and there is anything in the great test at St. Louis last summer, there is nothing better in the world than the pure-bred Jersey.

W. B. GATES.

Prince Edward County, Va.

CATTLE QUARANTINE.

Dr. Ferneyhough the State Veterinarian of Virginia informs us that so far as at present settled and unless some unforeseen difficulty should arise the Quarantine regulations affecting cattle will be suspended from the 1st December next to the 15th March following. During the time of suspension cattle can be shipped north of the line without being designated as quarantined stock and may be sent into all part of the United States. It will be one of the conditions attached to this much extended period

of suspension that all cattle shall be inspected by the local inspector before shipment. The regulations under which inspection and shipment can be made will be shortly published and proclaimed by the Governor. The farmers and breeders of the quarantined country owe thanks to Dr. Ferneyhough for the efforts he has so successfully made to limit the quarantine and to make the enforcement of the law as little vexatious as possible. If they would only shew their appreciation of his efforts in this direction by following his advice and directions for getting rid of the ticks it would soon be possible for him to present a clean bill of health for the state to the authorities at Washington and ask for a total suspension of quarantine.

A FIRST PRIZE JERSEY BULL.

At the Interstate Fair at Lynchburg October 3—6, there were sixty-one head of Jersey cattle in the competitive lists, comprising the herds of McLaury Bros., of Portlandville, New York; the Virginia Experiment Station, Blacksburg, Va.; Hon. Carter Glass, Lynchburg, Va., and Mr. Walter M. Carroll, also of Lynchburg. Col. William Lindsay, of New Jersey, an experienced breeder and old exhibitor of dairy cattle, was the judge. The McLaury herd is famous the country over and usually sweeps everything. The herd has been under preparation since last April for the Fall shows, and was expected to clean up all comers. Nevertheless, Montview Stock Farm divided some of the honors with McLaury's cattle, although Mr. Glass' exhibit was taken right out of pasture. A notable victory for this Virginia herd was scored when the judge handed to Mr. Glass the blue ribbon for Maret's Flying Fox, chief herd bull at Montview, who beat the Golden Lad Bull exhibited by Blacksburg, and McLaury's aged bull, Forfarshire's Brown King, with which the latter captured first prize at the great Trenton, New Jersey Fair and other Eastern Fairs. Mr. Dan McLaury, who was in person with his herd, promptly predicted the day before the judging that Maret's Flying Fox would win; and, after the award, said to Mr. Glass that Montview Farm could stand alongside any herd in the country with such a bull. Colonel A. M. Bowman, one of the best all-round stockmen in the United States, told Mr. Glass that two noted breeders of the Island of Jersey had informed him that Maret's Flying Fox got much of his quality and fine individuality from his dam, Charley's niece, one of the greatest cows of the breed. Maret's Flying Fox is a son of the celebrated Flying Fox, and was imported by the Coopers.

THE FUTURE OF THE RED POLLED CATTLE.

Editor Southern Planter:

Much has been written recently in the Southern Planter about other breeds of cattle and now it would not seem out of place for an admirer and breeder of Red Polls to say a word. The writer is a lover of livestock of all kinds and is one who knows the good points of most breeds of sheep and cattle and the bad points of not a few of them. He honestly believes that no one breed possesses all the good qualities and is frank to confess that he has never handled any breed of sheep or cattle that has not had its faults. To him it seems more important

produced by the champions of each breed. Why not admit that your neighbor's herd of Herefords are the finest beef cattle you ever saw except your own, that they are better than many Angus herds you have seen, that he has one bull that is just a little better than anything you have just now. Don't be saying that you miss uniformity in his herd and, therefore, can't like the breed. It's all right, brother. Remember that this same neighbor may be saying that your cattle are very uniform, but uniformly bunchy and low in the back. For the same reason the Hereford man must find the excellencies of his neighbor's Aberdeen Angus cattle.

I assert again that all these breeds are good. Any



Champion Red Poll at English Royal Show.
SIRE MAJOLINI (Photo by H. B. Arbuckle, Cut by Courtesy of Southern Cultivator).

from a breeder's standpoint to know the imperfections. There is no progress left for the man who finds his animal perfect.

Some one has written an essay on the "Beauties of the Imperfect" that has many helpful thoughts for the breeder of cattle and sheep. It seems extravagant for the Angus men to assert that they have the ideals of beef experts shown in their cattle, or for the Hereford men to contend that their cattle have reached the climax of beef production, or for the champions of the Red White and Roans to say that their cattle are the best all around cattle. How can they know this? Statistics abundant can be

one is good enough for me. If I like the style of the Shorthorn, why, that is all right. Why shall I not breed those that I fancy? We must try to remember that plenty of people with real good eyes can't see just as we do.

Again, among the dairy breeds we have the same situation. It was a fine defense of the golden-skinned Guernseys that our friend, Westmoreland Davis made. He was all right. He has a good breed of dairy cattle. The best cow I ever saw was a Guernsey, but there are noble Jerseys, too. My! what sweet little ladies of the pail are some of those Flying Fox cows I have seen! Some of those

thorn. These cattle are sure to come into more and more prominence in the future. The dairy cattle have a place and the beef cattle have a place, but where you find one farmer who should have pure bred cattle of these breeds, you will find one hundred farmers who could handle the combination cow. I refer to those men all over the country, who use pure-bred beef bulls on ordinary scrub cows. Everybody now-a-days wants pure bred stock. Such men can use the combination cow. Furthermore, Red Poll bulls are to be used largely for crossing on grade cows, for they give uniform color and dehorn the calves. The result of the cross is remarkable. The Red Poll breed has had its ups and downs in this country, for breeders have refused to keep the standards of the breed in view. I knew one herd of Red Polls that was an ideal beef herd. I doubt if many Shorthorn herds in this country could surpass it in this respect, but there were as few good milkers in this herd as you would find in the Shorthorn herds. This is just what you should expect.

There are a few families of the Red Poll breed that have shown remarkable milking quality along with exceptional beef qualities. I suppose that Rufus and Majiolini have both risen to fame as the greatest sires of the breed because the remarkable smoothness of their get combined with the superior milk producing qualities won the attention of all lovers of fine cattle. No wonder the blood of these famous bulls is prized. It is worth much to any breeder, who has the true ideals of the breed before him. It is also noteworthy that certain tribes show unusual numbers of strong milking cows. The tribe

A 1 and W 3 include some wonderful cows. I found so many cows of these tribes in England that were the strong milkers of the herds. The breed is coming rapidly to its own and each year shows marked progress. Some complain of a lack of uniformity in the breed. Please remember it is one of the younger breeds, as it is being to-day managed, and it requires great skill in the breeders to reach the highest results. Careful selection is necessary. The most beautiful and most uniform herd of cows I have ever seen is a herd of Red Polls in our own country. They are as much alike as peas and all exhibit this combination type that should appear in every Red Poll. Years ago as a boy I was going through the pens of show cattle at a fair. I loved good cattle from my earliest youth and could spend hours studying the show cattle at a fair. I found at this fair a red heifer of remarkable beauty. I had never seen one so beautiful. Her coat was the richest red and soft as silk. She had no horns.

She had the elastic step of a deer. I had that early learned to know that there was something about the step of a heifer that suggested a milk cow. I had never seen a heifer like this and did not know the breed. She looked to me to be a hornless Shorthorn of the aristocratic class. She had loads of quality. Some one told me this was a Red Poll. This was the first I ever saw. I was never satisfied until I owned some Red Polls. Given this type of cattle and you have the choicest thing on earth. They are the kind of cattle that wins a fellow's heart.

From what I have said you can judge that the breeding of Red Polls has not always resulted in the attainment of the Red Poll ideal. There are several large breeders in this country who are pressing the ideal hard, and we have every reason to rejoice in the progress. What we need is more cattle and more enthusiastic and level-headed breeders like the late lamented Secretary of the Club, McLain Smith, of Ohio, Martin of Wisconsin, Henderson of Iowa, and others I won't take time to name. We need such breeders in old Virginia. The time is ripe. Already two or three first-class herds are gathering close to us. Look out for the future of the breed in the old Dominion.

The Red Poll is truly the farmer's cow and possesses characteristics that belong to no other dual purpose cattle. Any breed of cattle without horns has a future. See how the Angus men bank on it. Note how the new breed of hornless Herefords is taking with the public. It is such a good thing that some have even doubted the truth of it. The Polled Durhams are pushing right to the front. The Red Polls seem to have been hornless as far back as the memory of man runneth, hence they are the greatest of all dehorners. They even beat the record of the Angus and Galloways. I am not so sure of this last. There are so many more grade Angus than Red Polls that one might be deceived. I will say they are fully up to the record. At Edgewood Farm we bred all our Shorthorn cows, of every color, to a Red Poll bull last season. Every calf was hornless and every calf a solid red but one and the white on this calf would not cover your hand. Here is uniformity for you in two fine points. How is this for a dehorning machine? Men will soon turn from this cruel practice, if they find bulls of such a breed of cattle perfect dehorners. Here is a future for Red Polls, as they cross well on all breeds. They are like the Shorthorns in this. Here's to the bonnie Red Polls, may they multiply in old Virginia like the sands on the seashore.

H. B. ARBUCKLE.

Maxwelton, W. Va.

MAKE CHEAP MILK AND BUTTER.

Large amounts of Timothy hay are often fed to dairy cows because it is thought to be a very rich and nourishing foodstuff, but in experiments made with 24 cows at the Station last winter, it would seem that shredded stover when well made and preserved can often be used to replace the timothy hay to advantage. As timothy hay brings from \$10.00 to \$15.00 a ton on the market and shredded stover is practically a waste product on the farm, the economy of utilizing the latter is apparent to all.

There is another question of more than passing interest to the dairyman, and that is the balancing up of his ration with some concentrate rich in protein. Gluten meal and cotton seed meal were fed on the basis of the content of digestible protein for this purpose and provided the market price is the same per pound of digestible protein, there is little to choose between the two, except that the gluten meal was not as readily eaten by the cows and it made the butter fat soft; whereas, cotton seed meal was readily eaten and increases the melting point of butter, which gives it a decided advantage for feeding in summer.

These results show that the proper basis of comparing foodstuffs is according to the amount of digestible protein they contain. It is thus apparent that farmers often make the mistake of feeding wheat bran which contains only 12 per cent. of digestible protein, as compared with cotton seed meal, which when pure contains 37.2 per cent. of digestible protein. As cotton seed meal and wheat bran can often be bought at practically the same price, the farmer who buys wheat bran pays three times as much for the digestible protein contained as the farmer who utilizes cotton seed meal.

ANDREW M. SOULE,

Dean and Director.

Va. Expt. Station, Blacksburg, Va.

GREAT BERKSHIRES FOR VIRGINIA.

Mr. Carter Glass, Congressman from the Sixth Virginia District, and owner of Montview Stock Farm near Lynchburg, writes us that he has purchased the noted Berkshire boar, Manor Faithful, imported by George F. Weston, superintendent of Vanderbilt's Biltmore estate, and sold for \$615.00. This is the boar that Mr. Weston, writing to *The Planter* of March, 1903, said was the sensation of the Biltmore sale that year. "There was not another boar found in England," wrote Mr. Weston, "combining so much quality and size without serious defect, with probably one exception, and he could not be guaranteed a breeder." Manor Faithful six

times won first honors in the show rings of England.

Mr. Glass also writes us that he has added to his herd of sows "Her Majesty," a great imported animal, herself a first prize winner at the English Royal Show, and an immediate descendant from Royal Show champions. This is the sow which the *Country Gentleman* of January 29, 1903, singled out from all others as "individually the best sow Biltmore Farms have ever found or imported." Her Majesty has been bred to Manor Faithful, and Montview Farm expects a litter of great pigs from the mating.

"Some of my friends who breed Berkshires," writes Mr. Glass, "want to know why I did not get a younger boar. Well, I have a younger boar. It is Montview Faithful, son of Manor Faithful, out of Princess Handley. It was only after I raised this younger boar, and noted his marvellous development, that I decided to buy the sire that could produce such progeny. He created a sensation at the Inter-State Fair at Lynchburg October 3—6, and captured the first sweepstakes prize as the "Champion boar of any age." When Manor Faithful dies, Montview Faithful will reign."

SHEEP PARASITES AND LAMB RAISING.

Editor Southern Planter:

The most satisfactory article on the sheep parasite (*strongylus contortus*) that I have read is Mr. Wing's letter taken from the *Breeder's Gazette* and published in your October number. The loss of late lambs in our country has been large this year, and I am satisfied that it has been caused by the stomach worm. I always thought doctoring a sick sheep or chicken quite useless, but having lost about 15 lambs, I thought I would try Stewart's remedy (turpentine in milk) in one case, but the lamb died. The lambs are first taken with diarrhoea, becoming thin and weak. In some cases they got well of diarrhoea before death. The early lambs were apparently not afflicted unless their failure to fatten well proved that they were afflicted also. I have kept sheep about ten years. At first the late lambs did as well as the early ones, but after a few years one or two would die in August each year, until this season they died in increased numbers.

I thought my pasture an ideal one for sheep. A blue grass sod of 22 years standing with high and rolling ground.

A flock of 80 ewes run on this large field all summer, changing them to wheat and other fields in winter and early spring.

Now the question is, can I not keep them in

this blue grass as usual by dosing them several times in spring with gasoline? The winter having killed the germs in the field. Though Mr. Wing says it will require 12 to 16 months. Soiling is not practicable. To cut up fields with fencing is very expensive and it will not pay to have a shepherd with a small flock.

The raising of lambs for market is profitable if we can rid the flock of worms and curs.

A few words from you on this subject will be a great help to me, though I have noticed that you hesitate to advise the use of gasoline for fear, I suppose, of stragulation.

Lexington, Va.

T. M. W.

We doubt much whether it would be safe to assume that the parasites in the pasture would be killed out in the winter. From the best information we have on the subject, it would seem that some of the parasites are able to maintain their existence for from 12 to 18 months after sheep have been withdrawn from the pasture. If any are still infesting the pasture in the spring, or if the old sheep are infected, the lambs are sure to suffer more or less from the disease after being turned on the pasture. It has been positively established by experiments that lambs kept on bare ground and fed forage crops and grain can be kept free from this parasitic disease, and this even though out of ewes suffering from the parasite. Of course if the advice of Mr. Wing is followed and the ewes and lambs are drenched with gasoline, it would seem from his experience that practically they may be protected from loss through this parasite. We were, until quite recently, very chary in advising drenching with gasoline as we had known so many cases where death followed almost immediately. Now that it has been clearly established by Mr. Wing and others that when properly administered there is practically very little danger of death ensuing, we think the remedy should be widely used. In one case 1,000 sheep were dosed with gasoline and only one died.

Had we a large pasture like that of our friend we would make a sacrifice one year and keep it free from sheep and thus clean the pasture of the parasite and then keep it clean. This could be done without serious loss by sowing a mixture of crimson clover, wheat and oats and rye on all stubble land in July and August as soon as the grain is cut and cleared, and upon this we would carry the sheep and lambs during winter and up to May or June. In February or March we would plow down one field of this pasture and sow in rape and upon this graze the Ewes and lambs in May and June, and then have another field of cowpeas or cowpeas and Sorghum sowed in April or May, upon which we could graze them

until fall grazing in the grain and corn fields was available. By thus handling the sheep and lambs all danger from parasitic diseases would be avoided and they could then go on the cleaned pasture in the winter and spring with every prospect of keeping free from disease. Large pastures should be divided if intended for sheep, as they always do better with frequent change of pasture, even though the pastures are not equally good.—Ed.

TEXAS FEVER.

Editor Southern Planter:

While trying to find fault with the "Tick Smart Alecks" and their method of sending bulletins which tell people how to get rid of ticks, Mr. C. A. Williams, of Halifax County, N. C., sends a "little bulletin" to The Planter about inoculation as a preventative for tick fever, and Mr. Williams can now be put down as one of those "Inoculation Smart Alecks."

A letter sent to an agricultural paper by a man who gives his own experience, is just like a bulletin, with this exception that in the former case the agricultural paper sends it without request to all its readers, while in the second case the person who wants to have a bulletin, must ask for it.

The writers of bulletin are trying to give their experience to the farmers in just the same way as Mr. Williams is trying to give his in case of inoculation, and if Mr. Williams belittles the work of the bulletin people, he should not be surprised to have people belittle his letters to the agricultural press.

However, there is a great deal of hope for Mr. Williams. He has learned two things about ticks, namely, that they cause Texas fever and that inoculation will prevent this fever. As Mr. Williams is not the original discoverer of either of these now well known facts, he must have gotten his knowledge either through the agricultural press or through a bulletin written by one of those "Smart Alecks." Now, having learned two facts about ticks, he may after a little succeed in learning the third and most important fact—that ticks can be killed for one and all time with a great deal less work than that of having to inoculate a number of cattle every year.

It would be very interesting to know what Mr. Williams has actually done in trying to destroy the ticks. It would then be easy to point out why he failed, and this would be good instruction for those who are at present trying to rid their farms from ticks.

I hope you will publish this communication. The subject is such a vital one for the whole South

that every effort should be made to get all farmers below the fever line interested in the subject. The loss of cattle due to the tick is enormous, and the quarantine restrictions are very annoying, to say the least, as I have found out to my own sorrow.

F. A. WEIHE.

Wake Co., N. C.

WHY CHOOSE MERINOS.

Editor Southern Planter:

In the August number of your excellent Journal, at the end of my article on "Sheep Husbandry in the South" you say, "We should be glad if our friend would give us his reasons for preferring the Merino type of sheep to the Down breeds for the South."

In reply I wish it first understood that I am a friend to all kinds of sheep in their proper place and do not wish to down any breed nor man or men, except it may be the Piney woods stock that I regard as but a shade above common goats. However, the fact of some of these common sheep being in every country of the South is *prima facie* evidence that improved sheep will live and do well with improved attention and feed.

My first reason for choosing the Merino was because I knew so well what they had done for me in different places and conditions both East and West, and to me, even in trial with other breeds they had become the "old reliable."

2nd. The history of the Merino in all countries where tried is that they adapt themselves admirably and profitably to all climates and conditions, and I do not believe the South will prove an exception to this general rule, and I think our success with these Merino flocks here at Statesville, in Iredell County, N. C., will go far to prove this.

3rd Within the last forty years, and especially in the last fifteen, the best breeders of the Merino have turned special attention to the production of a mutton as well as a wool producing sheep and have proved, beyond a question, that a heavy fleece of fine wool can be grown on a mutton body, a thing that Englishmen had led us to believe could not be; but we are Americans, and the Merino and the Merino grade mutton that is now being consumed in the Northern markets, beats the record of any country in any period of history.

4th Spring lamb—three and four months old—that the English made fashionable in Great Britain and partly so in the United States, is now being supplanted largely in the best American markets by the "Station-fed" ("stall-fed") lambs, highly fed and put on the market at six to twelve months old, and weighing from eighty to even one hundred and fifty

pounds gross. The Merino, if kept on such high feed from its birth can easily be made to do this and will yield from eight to twelve or fifteen pounds of wool.

5th The South is as well fitted for growing wool as the production of mutton and half the income from the sheep business may be had from growing wool, and fine wool at that.

6th The general healthiness of the Merino sheep in both cold and warm climates, and in large flocks, as compared with any and all other breeds, is generally understood and conceded.

7th The condition of the South at this time is not such as will most profitably produce high class mutton for "spring lamb," nor will it so well feed the so called mutton sheep up to a high standard. This was one reason for commencing with the Merino, at least as the basis of the business, and the "survival of the fittest" will prove what is best for the future.

8th Fine wool clothing will never be abandoned so long as people are able to have it, and they are getting more and more able. The British fashion ("fad") of wearing coarse and combing wool clothing should have but little abiding place with the people of the South, who deserve to wear the finest and best clothing in the world, and particularly when they can produce and manufacture it at as low a price as any other wool.

9th To assert that a heavy fleece of fine quality cannot be grown upon a mutton carcass of high excellence, is neither good common nor scientific sense. It is now being done; increasingly so. In establishing this—to us in the South—new industry, the intelligent people of the South should grapple it on the front line of its progress and so establish it; not having their faces turned to the "has beens" of the past with all its environments, but facing the promises in the great future which almost overshadow us in achievements that are already with us.

10th I like Merinos because they are a medium sized sheep, and that is the practical size of all kinds of domestic animals for general utility and success.

11th Because we in the South can produce one hundred pounds of "station-fed lambs" at average age of nine months, at a less cost price—fleece also considered—than we can—or any other people anywhere can—produce "hot house lamb at four months old while it is as nutritious and wholesome if even not more so, than the latter.

12th For four years I have carefully watched the markets of the world, and note that the "station-fed lamb" now often "tops the market," especially when a car load of the best is selected for the Buffalo, New York and Boston markets, where they often sell as

high per pound for the dressed carcass as any other lamb-meat.

The question with us should not only be "What can I do with sheep to get the best out of my worn out lands and the whole farm within the coming year?" That is a natural renters question, but a broader view is, "What can I do with sheep to make more out of my farm next year and thereby establish a solidarity of industrial business of a kind that will be more and more profitable to my lands and bank account as the years roll on?"

It might be noted that on the Continent of Europe, especially in the most thickly populated and highly cultured parts—aside from the British Isles—the Merino, in one or all of its four varieties; viz, Spanish, German, Saxon and French, holds prominence, not only with the wool growers, but with the manufacturers and the great consuming masses of the people. By no means do I say that our South-land should "ape" them, but we may profit by their example.

Iredell Co., N. C.

SAMUEL ARCHER.

THE CATTLE SITUATION IN VIRGINIA.

The importance of the live stock industry in Virginia will be appreciated when it is recognized that the average value of an animal in this State is \$17.04; in Kentucky, \$16.64; in Tennessee, \$11.43; in Alabama, \$7.70. With the large and increasing herds of pure-bred animals maintained on Virginia farms there is no reason why this State should not take and maintain the lead in the production of pure-bred animals to supply the farms and ranches lying to the south of us, where the condition of the live stock business is very unsatisfactory. The export cattle business is also worthy of exploitation. An export type of calf in Virginia is worth \$15.00; the yearling \$30.00; the two-year-old \$50.00 and the export steer \$70.00 to \$80.00. In North Carolina the corresponding types are worth \$3.85, \$8.30, \$12.41, and \$18.64. See what an advantage Virginia has, did we recognize this as clearly as we should. Are we making the most of our natural advantages for the development of our live stock industries?

Live stock industry conserves fertility. The rich lands of Tazewell, Russell and other counties are well known. In 1899 Tazewell spent \$10,400.00 for fertilizers, Pittsylvania \$189,890.00, and Norfolk \$398,850.00. Live stock farming certainly does conserve fertility, and at the same time enables wonderful economy in the matter of labor, two very important and essential points for the consideration of our farmers. This is not hard to understand, for a thousand pounds of pork removes from the land 17.66 pounds of nitrogen, 6.54 pounds of phosphoric

acid, and 1.38 pounds of potash. A thousand pounds of cotton seed meal removes 62.9 pounds of nitrogen, 28.8 pounds of phosphoric acid, and 8.7 pounds of potash. Furthermore, there is a profit in the production of beef animals that is enticing, to say the least. According to careful statistics obtained from many of the leading stockmen in the State, the profit per head on calves is from \$5.75 to \$6.50; on yearlings, \$8.00, and on export steers, \$10.00 to \$16.50. These figures were made up in the most painstaking manner. They do not take into consideration the manure, which is one of the most valuable adjuncts of live stock farming.

There are many stockmen who claim that they make fully 10 per cent. on their investment, and even if they only make 6 per cent., the fact that they can improve their lands by laying them down to grass and manage their farms with a minimum expenditure for labor makes their life almost an ideal one. While the live stock interests of the State have made wonderful progress in the last few years and while Virginia is recognized as one of the leading beef producing States in the South, there are large areas of land which can be more profitably utilized in grass in the future than in any other way.

ANDREW M. SOULE,

Dean and Director.

SELECT SEED CORN NOW.

Recent experiments by the Missouri Agricultural College show that, if the farmers of the State will give proper attention to the selection of seed corn this fall, the value of next year's yield of corn in Missouri will be increased \$8,000,000.

The principal thing these experiments show, which farmers have heretofore overlooked, is that it is just as important to select the stalk from which a seed ear comes as it is to select the ear itself, and hence, the mistake of thinking that the best seed corn can be selected from the crib where there are no means of telling on what kind of stalk an ear was produced. Of course, the best time to select seed, in accordance with these suggestions, is in the fall while the corn is being husked in the field. The ears should be sound, well matured, with deep straight kernels, loosely set; the stalk, of medium height strong and vigorous. Extremely tall stalks usually produce long loose ears that are not desirable. After the seed is collected, it should be stored in a dry, airy place to prevent it from sprouting or losing vitality. The best way to store it is to take pieces of string and tie the ears to them letting each one hang 2 or 3 inches apart from the next and then hang the strings from the rafters of the barn or attic where they will be dry and out of the way of the mice and rats.

The Poultry Yard.

BLACK HEAD IN TURKEYS.

The Rhode Island Experiment Station is placing more and more emphasis on the study of "black head" in turkeys, which has practically put an end to turkey raising in the New England states. Several Narragansett turkeys have been received, and the Station is expecting two lots of Bronze and White Holland turkeys. Five genuine wild turkeys from Virginia have been received, and a wild gobbler of North Carolina stock has been ordered. It is said that none of the lot from which the wild turkeys already on hand have come have died from black-head disease. Efforts are being made to secure wild turkeys from Florida and Mexico, and specimens of Merriam's wild turkey. With these an effort will be made to breed disease-resistant turkeys by crossing and selection.

Turkeys reared in the poultry plant in pens near ordinary fowls continue to die in large numbers of the black-head disease. Two lots kept on disinfected board floors after hatching, and while still young transferred to enclosures in a piece of forest land remote from the poultry plant, have done much better. In one of these lots four have died, but from the other none have been lost. The first lot was no doubt infected before it was placed in the pen.

If young turkeys are kept on disinfected board floors until a number of weeks old, a much larger percentage can be reared than when placed on the ground while still young, even in infected enclosures.

Results are emphasizing the fact that ordinary fowls carry the disease. They also suggest that there is a possibility of rearing turkeys on land where no infected fowl or turkeys have been kept, provided one starts with eggs and turkeys hatched in incubators and artificially brooded. Unless one is absolutely certain of obtaining eggs from uninfected stock, they should be sterilized by wiping with a cloth saturated with 95 per cent. alcohol before the incubation is started. The best success in incubating has been obtained by placing the eggs under hens for 25 days, and then finishing the incubation in artificial incubators.

PIP AND LIMBER NECK.

I read an article in your last issue about pip in chickens, and that some attribute it to the scale on the tongues. You are right about putrid animal matter being at the root of Limber Neck. It is the maggots produced in the putrid meat that causes limber neck.

When a chicken eats the maggots they multiply in the chickens. Borax is the remedy; put borax in the drinking water, about a spoonfull to a pint of water.

I have had chickens apparently dead, stretched out, and I gave them a strong solution of borax three times a day. If anybody doubts what borax will do to skippers or maggots just sprinkle a little on meat that is infested and note the results.

I lost a valuable lot of fowls before I found the borax remedy but have had no trouble since.

MRS. D. A. ALLEN.

Cabell Coy., Va.

POULTRY NOTES.

Editor Southern Planter.

I have recently had an experience in poultry management that strikingly illustrates the importance of getting hens and pullets into permanent winter quarters early. In fact I now believe it advisable to put them into winter quarters or permanent coops and houses as soon as they leave the brooders. I think this is especially true of the Mediterranean class as they are naturally more nervous and excitable than the larger breeds.

The experience I had was in regard to moving fowls from their accustomed quarters to new ones. I have recently moved to a larger farm and on September 19 I moved my fowls. This was done at night and as quietly as possible. They were crated in large roomy crates, not crowded, handled very quietly and put in good quarters on the large farm. The feed ration was continued the same, no change in attendant. Plan of houses very nearly the same; range better. I was getting a very good egg yield before the change in location, September 20, the first day in the new location the egg yield dropped from 60 per cent. to 20. The next day to 4 per cent. then to 2 per cent, and then to 0. It continued thus for nearly a week when we noted a disposition on the part of a few early pullets to lay. In a few days we were favored with a few small eggs and now at the close of the fourth week I am getting a few normal eggs. About 8 out of every hundred hens and pullets lay daily. I have noted their condition and actions very carefully during this time. The first few days they were decidedly "home sick." Did not eat well and kept concealed as much as possible. Then they began to come out more freely and feed better but were very shy and afraid of everything. The sight of a buzzard or dog would send them to

cover instantly. One 2-year-old cock was particularly suspicious and at the least excuse would tell his harem to beware. At his note of warning every hen would flee for safety. Any noise at night would set them to squawking and cackling. They would not go to their perches until dark and leave them in fear before daybreak. Hens that were moulting freely at the time I moved them seemed to "dry off" at once and their new coat has not grown a particle since. The few eggs that I get are laid by very early hatched pullets that were laying well before I moved them. The entire flock is in fine condition excepting the hens that were in the moult. Pullets are fully mature with fine, large, red combs. They are beginning to "sing" now and I am hopeful that their homesickness will soon be over and that they will get to business again.

My observation of this flock leads me to the conclusion given in the first paragraph of these notes. Put them in permanent quarters as early and soon after they leave the brooders as possible. Egg production, like milk production is a function of the nervous system and whenever we derange that we stop production. Any change, no matter how small, or any fright will curtail the egg yield in direct proportion to the change or fright. Feed and care cannot overcome fear and nervousness.

A subscriber in Alabama inquires whether I know of any remedy for "chicken eating hogs." Says he has a fine 2 year old Berkshire sow that kills and eats every chicken she can catch.

I know of two remedies, the shot-gun remedy and the chicken-tight pen remedy. Have tried condition powders, salt meat, meat scrap, ashes and charcoal, blood meal, clover pasture, in fact every reasonable thing that can be thought of to satiate any reasonable or unreasonable appetite. But the craving for chicken still continued. Some years ago I bought a large Chester white sow and she proved to be a confirmed chicken eater. I fed her everything I could think of, but no use. I saw her chasing a fine light brahma hen and in haste and anger threw a brick bat at her and happened to strike her squarely in the forehead. This stopped the chase and the career of that sow. This abnormal appetite seems to be hereditary. Feed her off.

A reader in Tennessee wants to know whether there is any infallible way of telling or knowing a hen's age after the second year. I do not know of any mark or sign by which the age of fully mature birds may be known certainly. A bird that is well cared for will not show any marks of age until about the fifth year, then almost anyone can see that she is on the shady side of life. Where one is keeping a large

flock it is best to have them marked with legbands and have the year stamped on them thus .05. Put one of these on the leg of every bird hatched in 1905 and you have it without question. Where one buys mature fowls it is mere chance whether you get two or three year olds. I have a lot of questions from people and will give them briefly and reply without giving details, my experience only. Is rye (threshed grain) as good for laying hens as wheat? No. Feed it very sparingly if at all.

Does Dwarf Essex rape make good winter feed for laying hens? Yes, but the eggs will not be satisfactory to sell to private trade. They will have very deep carrot colored yolks and have a bad taste and odor. Green clover or alfalfa is much better. How would you feed sweet separator skimmed milk to poultry? Use it for mixing the mash.

Is good dried beef scrap equally as good for egg production a green cut bone? No. Much of the dried "beefscrap" is not fit to feed to fowls.

How long can eggs for hatching be kept and get a satisfactory hatch? Much depends on the condition of the laying stock and the way they are kept as well as the season of year. With all these conditions right eggs will hatch well when kept 60 days. Eggs for hatching should be kept in a cool dark place and be turned every day. 50 degrees is about the right temperature. Fresh laid eggs, put in an incubator, while still warm will hatch in 24 hours less time than if allowed to get thoroughly cool. Can you give cause of and cure for legweakness? Lack of animal food, exercise and close confinement are the main causes. Feed bone in some form, give more exercise and more room and ventilation.

CAL. HUSSELMAN.

Roxbury, Va.

FRUIT GROWING IN VIRGINIA.

The business of fruit growing in this State is going apace. At Salem the Diamond Orchards cover an area of 450 acres in apples and peaches. Bent Mountain Apple Orchards contain upwards of 100,000 trees each. The Paw Paw orchards of West Virginia have 375,000 peach trees in one tract. In Floyd County there are orchards of 25,000 to 150,000 trees. Russel County in Virginia has one estate of 10,000 acres owned by one company, all devoted to stock raising and fruit growing. Albermarle County, Virginia, has also large orchards, and hundreds of small ones, and grows fruit of the very best quality. The whole of Piedmont Virginia and a large part of the Valley, is just becoming one great belt of orchards of apples and peaches.

The Horse.

DAN PATCH.

On September 4th. Dan Patch made his first public appearance this year, on the opening day of the Minnesota State Fair and drew sixty thousand people. He paced a mile in 1:59 1-2 over a track slow on account of rain. On the following Saturday, September 9th, he closed the Minnesota State Fair by pacing a mile in 1:57 1-2 before forty thousand people. He was shipped to the Indiana State Fair and paced a mile in 2:00 1-2 in a strong breeze and before over fifty thousand people. He was



DAN PATCH AND OWNER.

shipped to Allentown, Penn., and on September 21st he broke two world records in the presence of over sixty thousand people. At this time he reduced the half-mile track record from 2:03 to 2:01, and within forty minutes he reduced the half-mile track record to wagon from 2:11 to 2:05. Within seventeen days he paced five remarkable miles and was shipped twelve hundred miles. Dan Patch has recently broken his own record of 1:56, lowering the time to 1:55 1-4.

NOTES.

Henry L. Watkins, formerly with the C. & O. R. R., this city, for a long term of years, but now manager of the Carter Hall Farm, near Millwood, Clarke county, Va., writes me that harness horses are being bred there and that hopes are entertained of producing some of real class by mating an imported hackney stallion with trotting bred mares Carter Hall is a fine old estate of several hundred acres and the proprietor is Mr. Eben Richards, a wealthy New Yorker. The imported hackney stal-

lion, Ely Stockwell, who is only three years old, but large, handsome and well formed, heads the stud. He cost Mr. Richards \$3,000. Last summer at Lexington, Ky., Mr. Watkins purchased some richly bred trotting mares from the stud of Senator J. W. Bailey, and another season these will be bred to Ely Stockwell.

This lot included Bertha Charles, bay filly, 3, by Prodigal, 2:16, dam Bertha Derby, by Charles Derby, second dam Bertha, dam of 8 in 2:30 and better, by Alcantara; Ellen Cooke, black filly, 2, by Senator Cooke, 2:21 1-4, dam Ellen Stammont, by Stammont; Lillian King, bay filly, 2, by Prodigal, dam Naomi, dam of Wineka, 2:19 1-4, by Onward, and the bay mare Margeret, dam of Planet, 2:04 3-4; and Home Circle, 2:08 1-2, by Jersey Wilkes. Marquette was bred this season to Prodigal and the resulting foal will carry the blood of great performers and producers.

Kelly, 2:27, the son of Electioneer and famous Esther, under lease for two seasons by W. J. Carter from James Cox, and kept in the stud in Manchester, Va., has been well patronized and the shapely bay stallion returns to his beautiful home at Belgravia Farm, Jackson, Va., in fine bodily condition and full of vigour. Anent the return of Kelly I may add that his place in the stud at Manchester will be taken by the black stallion, Lord Chancellor, a product of the famous Village Farm of C. J. and Harry Hamlin, East Aurora, N. Y., whom I have recently purchased of William A. Walker, this city. Lord Chancellor has fine size, and the airiness and style peculiar to the Mambrino King family. He is six years old, and with little work has trotted miles in 2:30 and better. He was sired by Dare Devil, 2:09, sold by the Hamlins to Thomas W. Lawson, author of *Frencied Finance*, for \$50,000; dam Princess May R., by Prince Regent, 2:16 1-2. Both Dare Devil and Prince Regent were sired by Mambrino King, pronounced by the French Commissioners as the handsomest horse in the world, in addition to which Lord Chancellor also traces to Electioneer, George Wilkes and Abdallah, 15, the greatest by odds of the sons of Hambletonian, 10.

James R. Haggin's famous Rancho del Paso Stud of California, the largest breeding establishment for thoroughbred horses in the world, is to be dispersed and the land divided up into smaller parcels and sold for building and farming purposes. Although Rancho del Paso ceases to exist, Mr. Haggin has another powerful breeding establishment in the noted Elmdorf Stud, Lexington, Ky., where may be

found a splendid collection of thoroughbred stallion and brood mares. The Rancho del Paso horses will be shipped from San Francisco the latter part of November and will be sold by the Fasig-Tipton Company, New York, at Van Tassel & Kearney's big sale mart in the latter city. These horses will be shipped by the Southern Pacific, Union Pacific, Illinois Central and New York Central Railroads. This shipment, the largest ever made of thoroughbred horses, will require four trains of twelve cars each, and they are to be run on passenger train time. The railroads will get for this shipment \$42,500 in freight charges. In addition there will be other expenses, which will bring the cost up to \$50,000. The shipment will include about 30 stallions and nearly 550 brood mares. The sale will begin in New York on December 4th and doubtless some of the choicest and best bred of the great collection will find their way to Virginia and other Southern States.

The charter of the Petersburg Horse Show Association has been recorded in that city, with a capital of \$10,000 and defining the object as that of holding horse shows, agricultural fairs and the like there and in the counties of Dinwiddie, Prince George and Chesterfield. The new association starts out with bright prospects and doubtless encouraged to put forth greater efforts by the success of the one-day show held by the Petersburg people on October 7th. The officers are: President, Duncan Wright; Secretary and Treasurer, J. F. W. Ruffin; while the Board of Directors is made up of Duncan Wright, J. F. W. Ruffin, Ashton W. Gray, W. Roane Ruffin and J. McL. Ruffin.

Among our home-bred steeplechasers, who have been winning this fall, and some of them in company of real class, too, are: Grandpa, chestnut gelding, 6, by Lon, dam Virginne; Charawind, brown gelding, 8, by imp. Charaxus, dam Helmwind; Jimmy Lane, chestnut gelding, 6, by His Grace, dam Anna Page; and Gould, bay gelding, by Eolus, dam Lady Grace. The latter like Sam Craig and Charawind, is a product of the Ellerslie stud, and, while eleven years old, is still in the limelight, though having been raced for the past nine seasons, his latest essay being to win a Handicap Steeplechase at Latonia. Charawind annexed another handicap at Louisville. Grandpa, who was bred by A. S. Craven, Greenwood stud, is good this season, and at Belmont Park finished first in The Brook Cup Handicap Steeplechase, \$2,500 added and \$200 in pate; value to winner, \$3,000 and plate. Dis-

tance, about about three miles, which the son of Grandmaster did in 5:34 2-5, with those other Virginia-bred horses, Ivan and Ogress, among the "also ran" division.

Harry W. Spratley brought up some good material from White Oak Farm, Ellerson, Va., and with three horses carried off a couple of blue ribbons, one yellow, a white and \$200, with his entries in the hunter, park hack and harness classes at our recent Horse Show. This collegebred youth has a light hand with a firm seat in the saddle and is an able reinsman, too, with all. Young Spratley now spends most of his time at White Oak, but later on will likely join issues with his father, John Spratley, in New York, who has a trade of a class second to none in the "Metropolis."

Few Virginia trotting sires have been more liberally patronized than Kelly, 2:27, who, in the stud of W. J. Carter, at Manchester, Va., served over 80 mares in 1904, and that number has been exceeded by a score or more during the season of 1905. Kelly is a son of Electioneer and his successor in the stud, Lord Chancellor, also traces to that wonderful progenitor of speed through Mercedes, the dam of his famous sire Dare Devil, who got the elegant Beau Ideal, 2:15 1-4 and other fast ones. In the stables of W. L. Bass at Acca Farm, Lord Chancellor was worked some for speed during the spring and the summer and went a mile in 2:7 1-4, after which he was kept in the stud. For Bass the son of Dare Devil made a season of about 40 mares, among them being some of rich breeding. Like Kelly, Lord Chancellor has good manners, along with a level head and even temperament, characteristics certainly to be prized in any sire.

A feature of the Norfolk Horse Show, which followed our Richmond affair, was the splendid performance of Heatherbloom, who broke the world's high jumping record by clearing the bars at seven feet, ten inches. Previous to the attempt Heatherbloom, who is a big brown gelding owned by Howard Willets, of White Plains, N. Y., held the record of seven feet nine inches himself. Dick Donnelly, who has ridden the great jumper in all of his trials, was up on this occasion.

General William T. Townes, of the Aftongreen Stud, Culpeper, Va., has lost, by death, cause not given, the black colt, foaled 1904, by imported Fatheless, dam St. Olga, by imported St. Blaise

BROAD R CK.

Inquirers' Column.

Enquiries should be sent to the office of THE SOUTHERN PLANTER, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

APPLYING LIME.

Last fall I purchased Lee's Prepared Agricultural Lime with intention of sowing it with other fertilizer on wheat, but being informed that it would not do to sow other fertilizer on the Lime for six weeks after, consequently I sowed 240 lbs. of Grain & Grass prodcer made by Sasquehanna Fertilizer Co., Baltimore, Md., and have not sowed lime yet, but was thinking of sowing on wheat as a top dressing. Please kindly inform me in columns of your valuable paper best time to sow, this fall or next spring, and oblige,

W. U. Y.

Madison Co., Va.

Apply the lime at once after plowing the land and work in and then sow the wheat.—Ed.

PEANUTS FAILING.

Tell me what is the matter with my peanuts? Under a fine growth of vine I find an abundant growth of nuts, but notwithstanding the fine appearance there are many of the earlier sets rotten and many of the others (not the little late sets), but the best looking ones are without meats in them, so that what appears to be an exceedingly large crop must be a very moderate one.

B. F. WRIGHT.

James City Co., Va.

The cause of this failure is mainly climatic. We have heard of many such this year. The wet spring and early summer is the reason given by most old growers. A deficiency of lime in the soil is also said to be a prolific cause of nuts failing to set in the hulls.—Ed.

SMUT IN WHEAT—ABNORMAL GROWTH IN CORN.

1. Does top dressing wheat in the fall cause smit. 2. What causes corn to shoot out 3 or 4 little ears all together and none of them amount to anything.

SUBSCRIBER.

Powhatan Co., Va.

1. No. Smut in wheat and oats is a specific disease capable of being conveyed from one crop to another by means of the seed which carries the germs. Top dressing has nothing to do with it. Sow clean seed using a pickle of blue stone to kill any germs upon it and you will have no smut.

2. These are merely abnormal growths usually caused by climatic influences.—Ed.

PLANT FOR NAME.

I ship to you by express to-day a specimen of the plant referred to on page 751 of the Southern Planter, October number. Please give this plant a name, also state how comes it amongst my corn. I send you four or five joints from the bottom of an old stalk that has been up drying 2 or 4 weeks the other 2 pieces are from the top of a stalk just gathered from the field.

R. W. GATLING.

Gates Co., N. C.

The specimens sent seem to be abnormal growths of Corn. Abnormalities are found oftentimes in all animal and vegetable forms of life. The cause is uncertain and usu-

ally accidental and they rarely reproduce themselves. We are unable in any way to account for your experience, nor can we suggest a remedy likely to prevent. To look at the stalks seem to partake of some of the characteristics of Sorghum, but we have never heard of cross-pollination of corn and sorghum, and can find no suggestion of such a thing in the books.—Ed.

MANURE HEATING.

I presume it is a well known fact that stable manure will remain in a stable or in a pile for a long time without heating until it is disturbed. My experience has been that whenever it is taken from the stable, hauled out and put in a pile, unless separated by dirt or something of that kind that it will heat. Will you be kind enough to explain to me why this manure goes through a heat after being handled?

R. J. CAMP.

Manure left in the stall or stable and trod down solid by the stock does not heat much because the air is excluded from it. After it is disturbed and thrown up loosely into a lump the air gains access to it and at once fermentation is started and heat engendered resulting in the complete decomposition of all the vegetable matter in it if allowed to go on long enough. Microbic life in the manure has no doubt much to do with this process. This life cannot become active in the absence of air, but, lies dormant. In all decomposition germ life is active and heat-engendered.—Ed.

LAME COW AND HOG. STAND OF GRASS. FOOD VALUE OF CORN. COW FAILING TO BREED.

1. Is there any such a thing as cows having the scratches, like a horse. I have one affected in just the same way on her left front foot, and she is or has been so lame from the soreness of it she could hardly walk, what is best to do for it.

2. I also have a hog affected very strangely; he acts as though he has a boil on the bottom of his foot and will hardly put his foot to the ground. I examined his feet and they all look alike. Of course he might have sprained it some way.

3. I have a fine heifer (3 years old), that is barren. She has been served by three bulls but will not breed. Is there any remedy in such cases?

4. My field from which I cut wheat this year has a very poor stand of clover and timothy, it has never been limed nor has it had a very large amount of manure put on it. Would you advise me to plow it up next Spring and lime it and put it in corn and then in wheat and grass in the fall?

5. Is there any difference in the feeding value of white and yellow corn? Of sugar corn and field corn? Some farmers say yellow corn is so much better for feed than white corn, and that green sugar corn is much better for fattening hogs.

JOHN L. MORRIS.

Loudoun Co., Va.

1. Sometimes, but not frequently cattle suffer from a diseased condition of the skin of the legs much like "scratches" in horses, and generally caused by the same thing, viz.: dirtiness of the surroundings. Wash the leg affected clean with warm water and then apply a lotion made up of 1 oz. of creoline to a quart of water. Apply frequently.

2. We should suppose that the hog has got some foreign substance like a thorn or nail into the foot, or the foot

may have been twisted or sprained. It is not likely that there is any boll there except such a gathering as would be caused by a thorn or nail. Careful examination should be made for such a substance. A poultice made of linseed meal and hot water put into a bag and the foot enclosed in it would probably give relief.

3. A remedy is advertised for this trouble by several Veterinarians. Write Fleming Bros., Chemists, 200 Union Stocks Yards, Chicago. If the animal is naturally barren of course no remedy can be of any use.

4. If the stand is so thin that it is not likely to make a cover even if the winter be mild, plow it up at once and give a dressing of 25 to 50 bushels of lime to the acre and then in the spring apply 300 lbs. of Acid Phosphate per acre and sow cowpeas. But for hay in August, leaving a heavy stubble and plow this down. Then apply 300 to 500 lbs. of Bone Meal to the acre and work fine and sow to grass and clover without a grain crop in August or September, and you will be likely to get a good stand of grass.

5. No, there is practically no difference in the feeding value of the two corns. Sugar corn is a little richer in protein and fat than the field corn.—Ed.

BEET GROWING.

1. I wish information about beet raising for early market. What is the best kind? How far apart should the rows be and how far apart the plants be left when thinned?

2. How many pounds of seed per acre and when should they be planted? Should the land be manured this fall?

3. What is the best fertilizer and how much per acre?

4. Should it be drilled or put on broadcast?

5. Is this a very profitable crop in this State?

W. R. CLARKE.

Richmond Co., Va.

1. Extra Early Eclipse, Crosby's Egyptian and Early Blood Turnip are amongst the best varieties of beets. The rows should be wide enough apart to permit of horse culture, say 2 ft. 6 ins. or 3 ft. The plants should be thinned out to stand about 9 inches apart.

2 and 3. About 4 pounds of seed will sow an acre. The land best suited to beets is a light loamy soil that has grown truck and vegetable crops for several years, and no coarse manure should be applied or the beets will be unshapely and rough. The land should be well prepared in the fall and rotted farm yard manure be then applied. The rows should be laid off in February or March, and when opened should have half a ton to the acre of a good fertilizer having an analysis of about 6 per cent. ammonia, 5 per cent. phosphoric acid and 8 per cent potash spread in them and then be covered by a furrow thrown on each side. Flatten the rows with a light roller or log.

4. The seed should be drilled in.

5. The profitableness of the crop depends on its earliness. Some risk must be taken in sowing the seed early to secure this. If killed by frost sow again at once.—Ed.

DAMAGE CAUSED BY TRESPASSING BULL—STOCK BULL—HERD GRASS AND TIMOTHY, APPLE SORTING HOUSE.

A and B own adjoining farms, each builds 1-2 of dividing fence by mutual agreement and by long established custom in the neighborhood. B's scrub bull breaks through B's part of the fence and serves A's registered cow. A

is a breeder of pure bred stock and gets an average of \$75 for his calves. A's cow has a calf which is evidently a scrub. Is B liable for damages and how much?

2. A registered Angus bull (7 mos. old), has only one testicle that is perceptible. Is it likely that he will make a safe breeder? He is strong, lusty and has all appearances of a bull.

3. What is the comparative feeding value of red top (herd grass) and timothy both for pasture and hay?

1. A similar case to the one put in this question has been the subject of litigation in one of the western states and has been carried to the Appeal Court of the State. This Court upheld the decision of the inferior court in favor of the owner of the cow, giving him damages for the loss sustained by the service of the bull. The Court decided that the measure of damage was the difference between the value of the calf got by the scrub bull and one got by the pure bred bull of the owner of the herd.

2. Such a bull may be a sure stock getter. We have heard of several cases in our experience. The other testicle is no doubt retained above the scrotum by some obstruction.

3. Herds grass is richer in protein than Timothy, but not quite so rich in carbohydrates and fat. We prefer it as a food for stock to Timothy, as it makes a more palatable hay and especially is this the case when the Timothy has been allowed to become too mature before cutting.

4. We regret that we are unable to give the plan asked for. We have made enquiry of leading orchardists in the State as to such buildings and find that few of them have packing or sorting houses, but pack directly from the trees. Some have a shed in which they can store a few barrels as gathered to be sorted and packed under cover in case of a storm. We have heard of one new and complete packing and sorting house in the State and have written the owner asking him to give us plan and particulars of same. If we receive same we will publish in a later issue.—Ed.

VALUE OF DEAD HORSE AS FERTILIZER.

Can you tell me approximately the value in fertilizer of a horse weighing 1,000 lbs., if same is buried under 4 feet of earth and covered with 3 barrels of quick lime. Please give value not in dollars, but relative to some standard fertilizer. Say for instance "Pocohontas Guano."

R. W. EDMUNDS.

Prince Edward Co., Va.

This enquiry is a poser which we think few would attempt to answer, and we believe no one can do so satisfactorily. At the outset we would say that an animal buried 4 feet deep would not likely be of any value as a fertilizer to a crop except it might be to a deep rooting tree or vine. No ordinary crops send their feeding roots to this depth in any considerable number. The bones of the animal contain the most plant food and these buried that depth in lime would be slow to dissolve. The flesh and tissues are mostly water and would rapidly disappear and be carried away by drainage. The best way to get the fertilizer value of dead carcasses is to cut them up and put into a large vat or tub and pour sulphuric acid over them. This will at once dissolve the bones and flesh and then this can be mixed with soil and a valuable fertilizer, rich in phosphoric acid be made.—Ed.

BLOODY MILK.

I find the milk from my cow contains a good deal of blood. Can you or any of the readers of the Planter tell me the cause of it? I can't use it at all. I feed her myself and also milk her.

Chowan Co., N. C.

D. G. BOND.

Bloody milk is caused by various things. Sometimes it is the result of injury to the udder by blows. Sometimes it is caused by inflammation or congestion, and sometimes it results from eating acid or irritant plants. Deposits of tubercle or tumours in the udder or induration of the glands may also cause the trouble. The treatment varies with the cause. Give a dose of 1lb. of Epsom salts in warm water (1 quart), and daily thereafter 1-2 an ounce of saltpetre with a dram of chlorate of potash, bathe the bag frequently with hot water and rub with camphorated lard. Do not give too rich food nor too much of it until the trouble ceases. Careful milking is essential.—Ed.

GRAZING CLOVER.

Please advise in your next issue what to do as to grazing young clover during the present fall. I have quite a nice stand of sapling clover, which was seeded on wheat land last spring. Soon after wheat was cut, clover bloomed considerably. I have now mowed the field and raked it clean, and the young clover is about 4 to 5 inches high and looks fine. Will grazing in moderation injure the hay crop for the coming year?

CONSTANT READER.

We would not advise you to graze the clover during the winter. The cover it has now made will protect the roots during severe weather, whilst if you graze it, it will be pulled up or loosened and the roots be exposed to frost which will kill them.—Ed.

GRASS FOR NAME.

Enclosed find sample of grass coming in on my farm. I have not sowed any of this kind of seed. Stock seem to relish it. I am a western man from So. Dak., have asked all old Virginians in my neighborhood, they say they don't know the grass. Will you please tell me its name and whether it is of value.

2. What is the best thing to put in old pine fields, after taking pine off the land.

3. Give me best remedy to stop western men coming in and buying all our land and advancing prices, so we can't add any more to ours.

T. J. ONG.

Bedford Co., Va.

1. The grass is False Red Top. Whilst cattle eat it freely when young, it is not of a nutritious character and not worth propagation.

2. In our last issue you will see a long article, dealing with this question and the liming of land. Probably corn is the best crop the first year, with peas sowed at the last working and followed by crimson clover, wheat, oats and rye mixed, for a winter cover crop to be followed with peas the following year. Lime, however, is essential to secure a stand of these crops. It should be applied at the rate of 15 to 50 bushels to the acre as soon as the land is cleared and broken.

3. We have long been seeking a means to induce the western men to come in and now that they are coming we are delighted to see them. There is plenty of land for all yet available.—Ed.

COW HOLDING MILK.

Tell me how to make a cow give down her milk.
WILLIAM WALKER.
Halifax Co., Va.

Milk production is a nervous function, and, therefore, the surest way to ensure its being given is to avoid anything which will excite the cow but keep her calm and quiet. Many cows will hold their milk unless given something to eat whilst being milked and the bag should be handled and rubbed gently until the milk is given freely. Frequent handling and rubbing of the bag will be found of great advantage.—Ed.

HERDS GRASS, DISEASED SHEEP, MOHAIR.

1. What is the comparative feeding value of herds grass (Red Top)? Is its growth detrimental to the wheat crop following?

2. I have among my flock of sheep, a ewe that has lost its wool under its body. The skin surface seems diseased. Something like scratches in horses, is this a parasitic trouble? Infectious? State remedy.

3. What is the best disposition to make of a small lot of Mohair. Am experimenting on a small scale and wish to place it where it will bring its value.

C. BURRUS.

Caroline Co., Va.

1. Herds grass is richer in Protein and Carbo-hydrater than Timothy, but not quite so rich in fat. It is almost equal to orchard grass in all respects and is a good average feed. We have never known it to be detrimental to the growth of other crops following.

2. The sheep is infected with some external parasitic, and should be dipped in a tobacco dip such as that made by Laidlaw Mackill Co., of this City. All these parasites are infectious and should be checked at once when seen to be present.

3. Write the Diamond V Ranch, Rockcastle, Va., who are the largest handlers of Angora Goats in the South, and they will put you in the way of disposing of it.—Ed.

POTASH, NITRATE OF SODA, PASTURE.

1. How much Muriate of Potash ought I to mix with 1 ton So. Car. Phosphate and how much to apply to poor and how much to rich land?

2. Do you think any Nitrate of Soda ought to be mixed with it, if so how much, most of the land was in clover and Timothy last year.

3. Is November too late to sow clover, wheat, oats and rye for pasturage, and would it not make a better pasture for cattle if they were not allowed to graze it until first of May?

F. M. MERIWETHER.

Campbell Co., Va.

1. We doubt very much whether you need any Potash on your land. All the lands in Piedmont Virginia, have plenty of potash in their composition for all ordinary crops and only need to have lime applied to make it available. At most you need not use more than 50 lbs. of Muriate of Potash to the acre.

2. Do not mix Nitrate of Soda in a fertilizer to be applied now, but wait until the crop is growing in the Spring, and then apply 75 to 100 lbs. to the acre as a top dressing if the crop does not appear to start off well.

3. November is very late to sow this mixture in your section. If the winter should be a mild one it might stand but otherwise much of it will be killed. Vetches would likely stand better in the mixture than Crimson Clover. The cattle should not be turned on until there is a good growth.—Ed.

Miscellaneous.

NORTH GARDEN FARMERS' CLUB.

The North Garden Farmers' Club is not dead, but, on the contrary, is as alive as ever, though you have not heard from it recently. A most interesting and enthusiastic meeting was held at the home of Mr. J. G. Martin, on Saturday, the 4th, at which every member was present. One of our members, Dr. S. A. Robinson, having come all the way from New York City in order to attend.

The subject for discussion was "Is There Anything which we can Substitute for Red Clover, since it is so Difficult to get a Stand of this?"

Mr. S. B. Woods led off in a very interesting talk on the subject, suggesting cowpeas as a substitute. This was followed by a full discussion, in which the members generally agreed with Mr. Woods. One of the members stated that he had grown black-eyed peas on the same piece of land for about 15 years in succession for table use, leaving the vines on the ground, with the result that peas would no longer grow on the land. He then planted to corn, and to his surprise corn would not grow and it has taken three years of manuring to make it produce a fair crop of corn. How do you account for this, Mr. Editor? I enclose you a copy of the report of the inspection committee.

J. N. FAVIS.

Albemarle Co., Va.

Report of Inspection Committee at J. G. Martin's Farm.

We found 45 head fine beef cattle, weighing an average of 933 lbs., sold at 4 1-2 cents; 38 head fine grade Angus cattle; 42 head of nice 800 lb. Stockens. The committee think Mr. Martin has the finest lot of cattle they have seen, and doubt if there is another lot equal to them in the county. A fine lot of killing hogs, 32 in number; a nice lot of Shoats for another year. Horses—a good lot, in fine order, 10 in all, and 7 good colts. One extra fine young mule, two yoke of work oxen in fine order, 600 bushels of wheat badly damaged, by wet weather. A fine lot of nice hay, all under shelter, and about 60 barrels (300 bushels) of old corn on hand. The new crop of corn estimated at 3,000 bushels; 20 acres sown in grass Sept. 1st looking well. Apple crop rather poor. Mr. Martin expects to sow about 50 acres in wheat and rye. Stand of grass sown last year good. The whole farm shows good judgment and good management.

S. M. Page, G. W. White, W. H. Sutherland,
Committee.

The reason why Peas refused to grow on the land after having done so for 15 years was because they

had completely exhausted the land of the mineral plant food, phosphoric acid and potash. All the legumes are great consumers of the mineral plant food and it only shows how rich Albemarle County lands are in these substances when the Peas could find enough to support them for 15 years. As Corn also calls largely for phosphoric acid in its growth there was no wonder that it would not succeed after the Peas had so effectively done their work. If 250 lbs. of acid Phosphate and 50 lbs. of muriate of potash per acre had been put on the land it would no doubt have grown either peas again or corn —Ed.

ACID PHOSPHATES AS FERTILIZER.

Editor Southern Planter:

In a recent number of your journal some writer stated that acid phosphate tends to, or in fact, does render the soil acid, and for that reason makes the soil unfit for the production of clover and the other legumes, by interfering with the proper growth of bacteria.

Six years ago I purchased the run-down farm on which I now reside. The land is quite level and was in "beds," which formed pockets for water. This, of course, made the land wet, and still further added to its unproductiveness. I am a native of Augusta County, Va., and "beds" neither suited my eye nor judgment. When my neighbors saw me plowing down the "beds," they predicted failure. I harrowed and dragged until almost every trace of the old "beds" were obliterated. The land was seeded to wheat and grass. Much to my satisfaction, when the fall and winter rains came, I saw my fields draining well, with only here and there a slight amount of standing water and that very, very shallow. About one-third of the plot (it contains about 30 acres) has been mowed for hay the fourth year and while no clover seed was sowed on the land by me, the stand of clover hay increased each succeeding year. The other two-thirds I have pastured and clover hay increased in that also. Twelve acres of the latter was plowed in the spring. This I had disced and drag-harrowed and when it looked to be in pretty good order, I put four horses to my disc-harrow and simply "cut it all to pieces." Then I drag-harrowed it again. Four acres of this field is in corn and it bids fair to make 10 barrels to the acre; four acres in Kaffir corn and Taylor peas and four acres in Taylor's peas alone.

While a very hard rain the night I drilled in the corn and peas baked the land, and only about one-half

the seed sown came up, one will now find the ground covered with a luxuriant growth, and the roots of the pea-vines covered with nodules.

An old lady, (80 odd years of age), who was born and reared on this farm, said to me one day that she had never known a crop of any kind to grow on that field, and that I had come nearer raising a crop the first time I tilled it than she had ever seen. Its unproductiveness was well recognized by every one who knew the place. When I was having the field plowed last spring, some one asked my foreman "What are you going to put in that field?" And when he answered "Corn," the gentleman remarked "Well, it will tassel at 8 inches." I wish you could see it now. Intensive working and no "beds" have done the work of renovation, for I use no other fertilizer (when I use any) than acid phosphate.

The clover that was on it self sown, and the fine crop of corn, with a luxuriant growth of peas, full of bacteria-laden Nodules, will, I imagine, prove some what of a "stumper" to the writer who asserts that the use of acid phosphate renders land less and less unfit for the productive growth of the legumes. The remaining portion of my farm likewise shows that acid phosphate does not (at least always) nullify the chances of clover, cowpeas, etc., for I have elsewhere on the farm several acres of peas and soja beans with no room for grass and weeds to grow. I used no fertilizer whatever on the present crops.

(Dr). STEPHEN HARNSBURGER.

THE QUESTION OF FERTILITY.

Editor Southern Planter:

I have previously given, in the *Southern Planter*, some observation on soil fertility. This summer I have something additional to tell. In digging a cellar for sweet potatoes, I threw the dirt on top of the ground at various places where it seemed to be most needed. It was in the barn that I was excavating the cellar, and some millet seed got mixed with the clay that was thrown out. The weather has been very wet, and these seeds sprouted and came up. I noticed a bunch of the millet yesterday growing rank in the pure clay in which there was not a particle of humus mixed. Nor did the roots appear to reach through to the original surface below.

This case gives rise to various reflections. We are told that humus is necessary to soil fertility, but there was no humus here. Again, we are told that if we turn up a clay subsoil by deep plowing, it should be done in the fall so the winter freeze may fit the raw clay to give up its plant food, but in the case described the clay was thrown up only three or four weeks ago and the

growth took place immediately. I may further state that old clay fields, as usually cultivated, are very unproductive, while this clay bank from my cellar is just the reverse.

I am told that clay taken out of a well, deep in the ground, has been found by experience to be very productive. I have myself observed that clay washed out of an old-field gully produces rank vegetation where it spreads out in the flat below. As formerly stated, I have also seen a rank growth of briars on a claybank in the public road, and in various ways have I had evidence of fertility in pure clay.

Will the Editor of *The Southern Planter* please give us a satisfactory explanation of this? If humus is not absolutely essential to the production of good crops, we may dispense with manure and the incorporation of all vegetable matter, and thus be rid of the greatest barrier to the improvement of our worn-out lands. If common clay is full of available plant food, what need for spending good money for commercial fertilizers? Is it possible that our worn-out lands still contain abundant fertility, as recent government experiments indicate, but that shallow plowing and imperfect preparation of the seed-bed fail to conserve sufficient moisture to hold the plant food in proper solution for absorption by the rootlets of the plant? Or does lack of cover crops, through much plowing, allow the sun to bake the life out of the land by destroying the nitrifying bacteria? Sunshine you know, is noted for its germicidal qualities. Or does our poor cultivation of the land allow the available plant food to leach out, especially during the rainy season of winter? Has the soil been exhausted of its lime or other solvent bodies which furnish available plant food? Or is the soil so compacted in our poorly cultivated lands that air can not penetrate and furnish nitrogen to the plant roots? May not old Jethro Tull have been right after all when he said that a thorough cultivation of the soil, with rotation of crops, would keep our lands rich? Who can tell? Has nobody had experience enough to know?

C. KARNS.

We would like to hear what some of our readers have to say on this subject. We have so repeatedly expressed and emphasized our opinion on the importance of humus in the soil and deep and perfect cultivation that it is well known where we stand on this question. And yet, there would appear to be more factors involved in plant growth than these before a complete answer can be given to our correspondent. Let us have the subject discussed. We are prepared to join in the discussion and will help to solve the problem. It is of vital import to farmers of the South.—Editor.

THE Southern Planter

PUBLISHED BY
THE SOUTHERN PLANTER PUBLISHING CO.,
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor and General Manager.

B. MORGAN SHEPHERD,
Business Manager.

ADVERTISING RATES
will be furnished on application.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

SUBSCRIBERS failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticisms of Articles, Suggestions How to Improve THE SOUTHERN PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of post.

NO ANONYMOUS communications or enquiries will receive attention.

Address THE SOUTHERN PLANTER,
RICHMOND, VA.

ENTERED AT THE POST-OFFICE AT RICHMOND, VA., AS SECOND-CLASS MATTER.

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PUBLISHER'S NOTES.

To Advertisers.

Be sure to send in your copy or instructions on or before the 25th of the month for the following month's issue. This is imperative.

Subscription Offer.

For 50 cents we will send the SOUTHERN PLANTER to any one who is *not now* a subscriber, until the end of next year. In other words, we will throw in the remaining numbers of this year and start the subscription with our next January issue, which will be our usual Holiday Number.

WITH THE ADVERTISERS.

The Strömberg-Carlson Telephone Company start up the season's advertising with an attractive announcement on another page.

The Cyphers Incubator Company has its usual announcement on another page. This concern is well-known to numbers of our readers.

The Foos Manufacturing Company is offering its engines in an attractive card in this issue.

The J. W. Miller Company is another new advertiser in this issue. They are going right after the Incubator trade in this section.

As usual, Mr. J. F. Gaylord is offering his well known Defender Spray Pump. Look up his ad.

Sportsmen will doubtless be interested in the advertisement of the Union Metallic Cartridge Co., which will appear regularly hereafter in our columns.

The Coiled Spring Fence Co. has a couple of advertisements in this number.

The Spotless Washing Machine Co. offers its great boon to the house keeper this month. It makes a liberal offer, to which we invite your attention.

Mr. G. M. Ditto is offering a splendid feed grinder to our readers again this season.

Sloan's Liniment, known and used by hundreds of our readers, has an attractive announcement on another page.

We invite attention to the advertisement of Mr. Francis Bannerman.

The Wertz Nursery starts up the season's advertising this month. Look up the ad.

Wood's Seeds.

Vetches.

The HAIRY WINTER or SANDVETCH makes a hay or forage crop superior in feeding and nutritive qualities to Timothy Hay. It will also make the largest yield of dry feed of any crop that can be sown in the Fall. In this respect it is superior to Crimson Clover as it not only makes a larger yield than that crop, but is very much superior in feeding qualities.

Wood's Fall Catalogue tells all about Seeds for Fall Planting, Seed Wheat, Oats, Rye, Barley, Vetches, Grass and Clover Seeds, etc.

Write for Catalogue and prices of any Seeds desired.

T. W. WOOD & SONS,
Seedsmen, Richmond, Va.

Wood's Fall Catalogue also tells about Vegetable and Flower Seeds, Strawberry and Vegetable Plants, Lawn Grass, Hyacinths, Tulips, etc. Catalogue mailed free upon request.



**Black Hawk
GRIST MILL**

A hand mill for country, village and city housekeepers. Fresh even meal, Graham Flour, etc. Fast, easy grinder made to last. Weight 17 lbs. **\$3.00. EXPRESS PAID.** Soon pays for itself. You'll find a dozen uses for it. Grinds corn, wheat, rye, rice, spleen, coffee, etc. fine or coarse. Just the thing for cracking grain for poultry.

Black Hawk look FREE.

A. H. PATCH,
Mfr. of Hand Mills and Corn Shellers
Clarksville, Tennessee.



WALLACE'S CHAIN HAULING STANCHION

CLEAN SAFE, DURABLE AND COMFORTABLE.

WALLACE B. CRUMB, FORESTVILLE, CONN.
P. O. BOX 428

BANK OF RICHMOND,

Main and Tenth Streets.

CAPITAL AND PROFITS, - - - \$1,134,938.14.

Special attention paid to out-of-town accounts. Correspondence invited.

Three per cent. interest allowed in Savings Department,
Compounded semi-annually.

Quaker City Feed Mills at Reduced Prices.

It is announced that the famous Quaker City Feed Mill is on the market at a reduced price this year. Whoever buys a Quaker City buys what is confessedly the standard, and has been for nearly 40 years. It is ball bearing, easy running, has separate hoppers for ear corn and small grains and surely does more grinding for power used than any other. We show one of the eight

sizes. The manufacturers, The A. W. Straub Co., 3737 Filbert St., Philadelphia, and 47-49 S. Canal St., Chicago, send the Quaker City anywhere on ten days' free trial, freight paid to destination. Catalog free. There seems to be no reason why every feeder should not afford himself a Quaker City this year.



A Lower Price.

Far less than any other mill of standard make. The difference is clear gain. There is not now and never has been any superior to the standard

NEW HOLLAND FEED MILL.

Noted for fast grinding, easy running, durability and wide range of work. Ear corn and small grain feed mixtures, coarse or fine, table meal, etc. Mills in different styles and sizes, with or without elevator or barge. Let us send you one on free trial. No obligation to buy and no expense if you don't like it. Catalog free.

Write for booklet on our fast cutting Wood Saws, the best made.

New Holland Mch. Co.,

Box 153.

New Holland, Pa.

TRY THIS MILL

10 Days Free.

I will send any responsible farmer one of

DITTO'S

Latest Double Cut, Triple-Geared

Ball-Bearing

Feed Grinders

On Ten Days Trial—No Money in Advance.

If it does not grind at least 3% more ear-corn or any grain than any other two horse sweep mill made, send it back at my expense. Don't miss this offer. Ball-bearing throughout. Only 10¢ sweep. Light draft. Grinding rings never touch each other—they last for years. Both grinders revolve, self-cleaning. Ask for new Catalogue. **G. M. Ditto, Box 48 Joliet, Ill.**



We Will Give A RURAL MAIL BOX.

The best and handsomest Galvanized Steel Rural Mail Box made, to the first person sending address of party canvassing for petitions for new Rural Route. Write today. KENTUCKY STAMP CO., DEPT. 85, LOUISVILLE, KY.

We invite attention to the full page advertisement of the Sanders Publishing Co., in which they offer their splendid periodical, The Breeder Gazette.

P. B. Buell & Son have a couple of advertisements in this issue, to which we invite your attention.

H. Armstrong is making a special offer on Hereford Cattle and Dorset Sheep.

The East View Dairy is offering Holstein Friesian cattle.

Montview Stock Farm, owned by Hon. Carter Glass, is offering some blue blood Berkshires at prices which farmers can well afford to pay.

Mr. Jas. M. Hobbs is making a special offer on hogs, sheep and poultry of several breeds. Look up his ad.

W. T. Hood & Co., Proprietors of the Old Dominion Nurseries, have their usual seasonable announcement in this issue.

HARRISON'S NURSERIES.

We invite special attention to the advertisement of the Harrison Nurseries to be found on the outside cover of this issue. This firm has probably the largest assortment of nursery stock east of the Mississippi River and from our inspection of it recently, we would also say that it is just about the finest. This firm is going right after the trade in this section and are especially desirous that parties contemplating the planting of orchards, will come and visit their nurseries at Berlin, Maryland. We will have something more to say about these Nurseries next month and show photographs of sections of their nurseries.

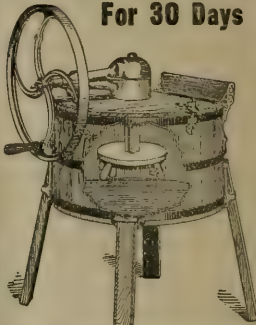
MR. R. P. COOPER'S PRIZE RECORD.

We are very pleased to know that Mr. R. P. Cooper of the well known firm of Wm. Cooper & Nephews, makers of Cooper's Sheep Dip, made such a splendid record at the Royal Agricultural Show the past summer. He secured no less than 13 prizes and 2 reserves, and this in the hottest competition imaginable. His Shorthorn bull, "Meteor," was placed second in a class of 44, beating an animal, for which 2,000 pounds (\$10,000) had been refused. With his Red Polls, he secured first on a 1903 bull and second on a 1904 bull, also third and reserve in the heifer class. With his Shropshires he literally swept the boards, winning no less than 11 prizes in 7 different classes.

THE GLOBE TROTTERS DICTIONARY.

We are greatly indebted to Mr. Wm. S. Myers, Director of the Nitrate of Soda Propaganda, for a copy of a very handy little book of the above title. It is exceedingly useful and convenient to travelers abroad, giving as it does, pretty nearly all words used in ordinary conversation, in several languages. Write him at 12 John St., New York City for a copy.

A Washing Machine FREE For 30 Days



Here's a chance for any woman to get away from the washboard forever. Simply drop us a postal card, asking for a Spotless Washer, and we will send you one, on trial, for 30 days. It will cost you only a penny. We even pay the freight. If you don't like it, if it doesn't do the wash quicker, better and with less labor than any other machine, tell us so, and we'll pay the freight back of the machine like it we will make terms of payment on such easy installments that anyone can buy it. There are no strings to this offer. It's a square deal. We make it, because we know that the

SPOTLESS WASHER

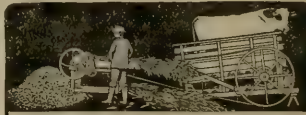
is the best machine made. It does most of the work itself. You only have to guide it, and you can do this sitting or standing. Operates in either direction. Made of finest selected Virginia White Cedar. Steam tight—never comes loose. Mechanism all enclosed—no danger of hands or clothing being caught. Ball bearings—lightest running.

Send to-day for full particulars of this remarkable offer and our proposition.

SPOTLESS WASHING MACHINE CO., Inc.

Box 564 Z, Chicago, Ill.

69 Z, New York, N.Y. 64 Z, Richmond, Va.



HEEBNER'S FEED CUTTERS.

Feed all your fodder. By using Heebner's cutters with shredder attachment the whole of the harvesting crop can be cut, crushed and shredded, and rendered edible. No waste. Animals eat it greedily and thrive. Shredder attachment costs \$5.00. The double cut cutter, also make Road Power, Lever Power, Lick and Penna. Thrashers, Wood Saw, Feed Mills, etc. Cash or free.

HEEBNER & SONS, 85 Broad St., Landale, Pa.

STAR FEED MILLS

Belt powers, simple and geared sweeps. Mills for service. Grind anything to any fineness, grind fast, they last. Favorites for 35 years. Priced so it pays to buy. Write for Star booklet and guarantee.

THE STAR MFG. CO., 66 Depot St., New Lexington, O.



FARMERS

HANDY WAGON

Low steel wheels, wide tires, make loading and handling easier. We furnish Steel Wheels to fit any axle, to carry any load. Straight or staggered spokes. Catalogue free.

EMPIRE MFG. CO., Box 140 F Quincy, Ill.

WE'LL PAY THE FREIGHT
and send 4 Buggy Wheels, Steel Tire on - \$2.75.
With Rubber Tires, \$14.50. 1 imp. wheel 4 to 4 1/2 in.
tread. Top Buggies, \$28.15. Sleighs, \$10.75. Write for
catalogue. Learn how to buy direct. Repair Wheels \$4.00.
Wagon Umbrella FREE. V. BODER, Cincinnati, O.

DEHORNING ISN'T CRUEL

It may be with a saw, but not so when the
KEYSTONE DEHORNER
is used. It cuts from four sides at once; makes a sliding, sharp shear cut. Any stock-raiser can do it easily. No crushing or splintering of horns or tearing of flesh. Done in 2 minutes. Send for free booklet.
M. T. Phillips, Box 45, Pomeroy, Pa.

SPECIAL OFFER.

DAVIS CREAM SEPARATOR.
Simplest on earth, easiest to clean, run, understand, bigger profits for same reason, result of 20 years experience, send today for free book. 126 and special introductory offer, agents also wanted. **DAVIS CREAM SEPARATOR CO.**
48 to 58 N. Clinton St., Chicago, Ill.

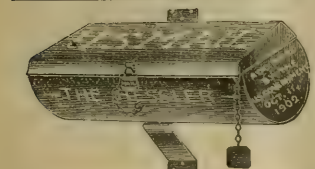
The Dairy Problem Solved, and Solved Rightly.

Since man first began to milk cows, the problem of how to make the most dollars from them has been up for solving. After centuries of experiment the way has been discovered.

An Easy Running
Empire
Cream
Separator

will get these dollars for the cow-owner, and will get them all. This is no experiment, it is an actual fact proven by years of experience by farmers the country over.

You want to know why we want to tell you why. Write, and get our free books on dairying. Read these; then investigate the Empire. The result can only be one thing, a complete proof that our statements are true. **Empire Cream Separator Co., Bloomfield, N. J.**
Creamery Churn Mfrs. Agents, Louisville, Ky.



THE HESSLER still leads. Best made and most durable box on the market. Don't be deceived by pictures that look like THE HESSLER. To get the real thing, ask for the original genuine HESSLER BOX, not the imitation. Agents wanted in every town.
H. E. HESSLER CO., Syracuse, N. Y.
Factory 2.

TIDEWATER (VA.) NOTES.

Editor Southern Planter:
A series of the three "Farmers Institutes" conducted by Mr. A. O. Mauck, member of State Board of Agriculture and Immigration, was held last week in Isle-of-Wright, Nansmond, and Princess Anne Cos'.

Considerable interest was manifested by the farmers of the different counties, and the attendance was fairly good; but it will be better next time.

The Agricultural Dept of the Blacksburg School was ably represented by Prof. A. M. Soule, Director of the Experiment Station there; the State Test farm at Saxe, Va., was represented by Prof. S. B. Heiges; and the Agricultural Dept. of the Hampton School was represented by Prof. E. A. Bishop.

The above named gentlemen were down on the program for such topics as "The restoration of soils," "The economical use of Fertilizers," "Corn growing in Va.," "Forage crops adapted to Eastern Va.," "How to feed stock with best results," "Trucking and market gardening," "Fruit culture—how to plant trees—their diseases and remedies," "Profitable farm crops for Eastern Va., and other topics of minor interest.

Mr. Lyman Babcock of Princess Anne Co., presented the subject of "Trucking," and all the topics were ably handled, and attentively listened to. The session at Va. Beach, for Princess Anne Co., was especially interesting, as the ladies under the auspices of a local church, honored the Institute with their presence, and filled a long felt want "by supplying an unlimited amount of choice Lynnhaven oysters, and a large list of other first class eatables, for the refreshment of the "inner man." While the speakers handled their topics, and filled the heads of the farmers with facts, figures and features, connected with the profession of farming, the ladies, prepared substantial and palatable food with which to fill the stomachs; and thus reached the hearts of the assembly; because it is a fact that the best, easiest and shortest road to a man's heart is by way of his stomach.

The State Dept of Agriculture, in general, and Mr. Mauck, the member from the 2nd Dist., in particular, are to be credited and congratulated for taking up and arranging for such meetings of the farmers. If the farmers of the state would get together, work together, and keep step together, for a year or two they would all get enthusiastic over better stock; better seed; better implements, and better and improved methods of farming.

The State Department of Agriculture "should be maintained, and liberally supported by the State of Va., and our Agricultural Interests should be kept to the front until the spirit of improvement and development along agricultural lines reaches every portion of the grand Old Commonwealth.

THIS IS IT

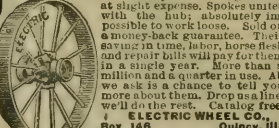


ELECTRIC

The wagon you are looking for; the wagon folks are all talking about. By every test it is the best—no living man can build a better. Of course you have guessed that it's the

ELECTRIC HANDY WAGON

Low steel wheels; wide tires and durability and good service written all over it. Don't be talked into buying an inferior. Get the wagon that lasts. Or we'll sell you a set of Electric Steel Wheels and make your old wagon new at slight expense. Spokes united with the hub; absolutely impossible to work loose. Sold on a money-back guarantee. Their saving in time, labor, horse flesh and repair bills will pay for them in a single year. More than a million and a quarter in use. All we ask is a chance to tell you more about them. Drop us a line, we'll do the rest. Catalogue free.



ELECTRIC WHEEL CO.,
Box 140 F Quincy, Ill.

NEW HOLLAND

WOOD SAW

Great thing for home work, a money maker for jobbers. Very speedy and durable. Saws wood, poles, posts, rips boards, pales, lath, etc. Three sizes. We make several styles and sizes Feed Mills. Write for free booklets.
New Holland Mach. Co., Box 153, New Holland, Pa.

PATENT YOUR IDEAS

\$100,000 offered for one invention. \$5,500 for another. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. W. adventure your patent for sale at our expense.
Chandler & Chandler, Patent Attorneys,
965 F. Street, Washington, D. C.

No Combines or Trunks in CUTAWAYS.

Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the subsoiler and harrow. It is an excellent machine for covering in sugar cane. Strength guaranteed.
Can plow a newly cut forest, stump, bush, or bog land, leaves land true, clean for any crop.

Clark's Double Action Cutaway Harrow moves 15,000 tons of earth in a day.
Send for Circulars.

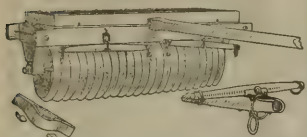
Clark's Rev. Sulky Disc Plow

Made single or double. One or two furrows 8 to 10 inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar

plow made. When Clark's grass tools are used as directed in his grass circular, we, the C. H. Co., guarantee them to kill wild mustard, charlock, hardhack, sunflower, milk weed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seeding to grass.

THE CUTAWAY HARROW CO.,
Higginson, Ct., U. S. A.

The Cambridge. Corrugated Land Roller and Pulverizer,



THE BEST IN THE WORLD.

Used by the State Test Farm, Va. Ag'l College, Sweet Briar Institute, Miller M. L. School, and some of the best farmers in the State.
Address R. F. HARRIS & CO., Charlottesville, Va.



THREE TRAIN LOADS OF ARMY GOODS

Sold to Francis Bannerman, 501 Broadway, N. Y.

Tents, all sizes, \$1.00 up; Mess Pans 20 cts.; Haversacks, 10 cts.; Revolvers, 50 cts. up; Sword Bayonets 20 cts.; Saddles \$2.75 up; Bridles \$1.00; Complete New Uniforms \$1.50; Holsters 10 cts.; Navy Hats 10 cts.; Carabins, \$1.00 up; Muskets, \$1.00 up; Machetes, \$1.00; Antennae, 25 cts.; Leggings, 25 cts. up; Spurs, 40 cts.; 176 PAGE ILLUSTRATED CATALOGUE MAILED FREE. Largest stock in the world—15 acres required for storage. Lariats, 58 cents.

This "Williams" Pump FREE.

To introduce our patented pumps in every county, we will send one pump FREE to the first to write accepting our special offer. Write to-day. "A Woolen Pump made of iron. Just remove the handle to remove rubber-leather. Stock made of steel, base adjustable, brass drain cock prevents freezing. GUARANTEED. All repairs done above ground.



"Williams" Pump Co., 467 Harrison St., Indianapolis, Ind.

Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 3 horse power, \$100; 6 H. P. double cylinder, \$200.

SOUTHERN MACHINE MANUFACTURING CO.,

731 E. Cary Street, Richmond, Va.

BOILERS-ENGINES

new and second hand, from 2 to 100 H. P. TRACTION ENGINES, \$225.00 each; 6 H. P. Vertical Engine and boiler, \$110.00; 8 H. P. Vertical Boiler and engine, \$60.00; 12 H. P. Vertical Boiler and engine, \$100.00; 22 inch Corn Burr, \$50.00; Corn crushers from \$10.00 to \$25.00; Gas and Gasoline Engines all sizes, new and second hand boilers from 2 to 100 H. P. New boilers of every description made to order. CASEY MCH. CO., Springfield, Ohio.

Farm Phones

Have a telephone service of your own. Cost of instruments small compared to convenience and time and money saved.

AGENTS WANTED

Write for free book explaining cost and how to organize, build and operate telephone systems among your neighbors.
Cadiz Electric Co.,
58 C. O. C. Building, Cadiz, O.

FARM TELEPHONES

How to put them up—what they cost—why they save you money—all information and valuable book free write to J. Andrae & Sons, 334 W. Water St., Milwaukee, Wis.

The farmers of the state have many problems to settle and solve. There are a thousand ways and means and improvements which may be and should be introduced whereby the farmers' efforts would meet with a greater degree of success.

There should be local organizations in every county in the State. These need not be complex, comprehensive, or complicated, nor need they be at all expensive. A half dozen good men, intelligent farmers, can get together at any time and at almost any place, and make a simple temporary organization, and arrange a short simple program for the meetings; and such a beginning, in most cases, works out a splendid result.

We hope the State Department will keep up this work, until enough "leaven" is distributed here and there throughout the state to "leaven the lump"—and set Agricultural matters going up grade "under good headway."

There is room; there is need; there is ample opportunity. To just one point or item we beg to call attention. There is not a farmer in the State of Virginia, who cannot increase his corn yield fully 10 per cent. without the expenditure of a cent, simply by using a little good judgment, care and intelligence in selecting his seed corn.

The "Institutes" bring out these and many other points of practical use, benefit and advantage to the farmer.

A. JEFFERS.

WHAT HE FOUND.

During the South African War, when that country was under martial law, letters sent home by British soldiers had to pass through the hands of a censor.

A private in a Yorkshire regiment had sent four or five letters home, telling his parents about the doings of his regiment, and portions had been obliterated by the censor and were therefore illegible on their arrival. At the foot of the next letter he wrote:

"Please look under stamp."

At the censor's office the letter was opened and read as usual. The officer in charge spent some time in examining the stamp from the envelope so that he could read the message which he was certain he would find there. At last his patience was rewarded, but his feelings can better be imagined than described when he read these words:

"Was it hard to get off?"—Philadelphia Ledger.

A MOTHER'S JUDGMENT.

Johnny (to his sister's young man)—What base-ball club did you play with this season?

Sister's Young Man—I never played a game of base-ball in my life. Why do you ask?

Johnny—Cause I heard ma tell sister that you were a splendid catch.

THE IMPROVED
SCREW STUMP PULLER.
Write for Prices.



Chamberlin M'g Co., Olean, N. Y., U. S. A.

HERCULES Stump Puller



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 feet without moving or changing machine. Strongest, most rapid working and best made.

HERCULES MFG. CO.,
413 17th St., Centreville, Iowa.

The Monarch Stump Puller.

The best on earth; you make no mistake in buying of a man of 5 years' experience in pulling stumps. We set up the Puller and guarantee satisfaction before we want your money. 5 sizes.



Write for catalogue and prices.
JOS. W. RITCHIE, State Agent, R. F. D. No 39, Gretna, Va.

Monarch Stump Puller.

Will pull stumps seven feet in diameter. Guaranteed for 12 mos. and a strain of 250,000 pounds. Catalogue and discounts. Address: MONARCH GRUBBER CO., LONE TREE, IOWA.



THE GENUINE SMITH STUMP PULLERS. W. SMITH GRUBBER CO. LACROSSE, WIS., U.S.A. CATALOG FREE

FRAZER Axle Grease

Best in the world. Its wearing qualities are unsurpassed, actually outlasting 3 boxes any other brand. Not affected by heat. Get the Genuine FOR SALE BY ALL DEALERS.

PROBATIONED PRACTICALLY PERFECT

Leading poultry experts say the many improvements in the new

1906 Pattern Standard Cyphers Incubator

Made it worthy the name "The Perfect Hatch." Sold on 90 days trial, to prove that in convenience of operation; in economy of oil; in certainty of results; in large hatches and especially in strong and healthy chicks, it has never been equaled. Our new catalogue tells why. A poultry catalogue, 228 pages, (8x11) seven practical pictures, 50 illustrations, free if you mention this paper and send addresses of two persons interested in poultry.

Address nearest office.

Cyphers Incubator Co., Buffalo, N. Y.
Chicago, Boston, New York, Kansas City or San Francisco.

You can't tell a good incubator or a good brooder by looking at them. The only true test is in the Hatching and Raising of Chicks. The machines that Prove Best by that test are the

IDEAL

Incubators and Brooders.

Made by the man who knows and backed by the J. W. Miller Cos., guarantee to give you satisfactory results or your money back after 30, 60 or 90 days Free Trial. If you are discouraged try the Ideal—if you don't want to be discouraged try the Ideal. Send for the book "Poultry for Profit," Free, 12 pages, illustrates and describes everything needed to raise poultry.

Address **J. W. MILLER CO.,**
Box 312, Freeport, Illinois.

BUY DIRECT

and save dealers profit. Vertical, Horizontal, and Portable Gasoline Engines. Pumping outfits a specialty. Our Engines are guaranteed to do all we describe them or your money refunded. Write to-day **BAUROTH BROS.,** 50-56 Fisher St., Springfield, Ohio.

Well Drills

For Horse, Steam or Gasoline Power

Well Augers

For Horse Power

Address
LOOMIS MACHINE CO.
TIFFIN, OHIO

ARTESIAN WELL Contractors.

DEEP WELL DRILLING a specialty. Estimates made free of charge in all localities. If you want any work done write **M. S. SCHAILL, Michaux, Va.**

PRINTING DONE

at the following prices:

Envelopes	100.	500.	1,000.
Letter Heads	20c.	\$1.00	\$1.50
Note Heads	40c.	1.25	2.00
Bill Heads	35c.	1.10	1.75
Cards	25c.	1.10	1.75

Send cash with order.

STAR PRINTING CO., Millboro Springs, Va.

HANDY WAGONS AND FALL WORK.

The kind of work that farmers have to do in the fall suggests anew the great usefulness of a low platform wagon. Nothing could more perfectly meet the farmer's needs in the cornfield. Whether for ensilage hauling, hauling in the bound bundles or shocks, gathering snapped or husked corn, it is all the same. There is no occasion for lifting the corn as high as a man's shoulders when a low wagon, but little higher than a sled, enables the farmer to do so much more work and do it so much easier. Corn gathering throughout the region where this paper circulates is a big item. It is an every year's job. For this item of farm work alone, in its various forms, a farmer would shortly come to feel that he had his money returned to him in convenience and extra work accomplished, by owning a handy wagon.

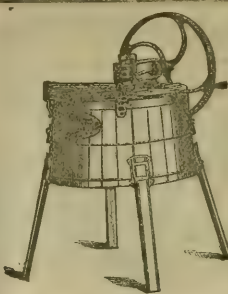
But corn gathering is not the only use of such a wagon. There is no end to the jobs where it serves better than the old style, high wheeled, narrow tired wagon, and these jobs continue throughout the year. There's manure hauling always. There are fields to be cleared of stones and stumps. There are stones and dirt to be hauled on the road. Apples are to be gathered; basket fruits are to be hauled, a growing use for this kind of wagon. We can't mention them all. Every practical farmer will call up a dozen needs for just this kind of a wagon. With the convenience he gets a road maker instead of a road rutter, easy pulls over meadows and fields, etc. With the make of handy wagon we refer to above he gets an assurance of strength and durability.

The Davis Cream Separator Co. would like to furnish interested parties with catalogues, etc. of their machines. Look up the ad.

A RELIABLE HAY PRESS.

There are a good many hay presses on the market. One of the most popular is the Eli, manufactured by the Collins Plow Company, Quincy, Ill. Its reputation comes from long service in the field. The Elis are familiar wherever hay is baled. There are a long line of presses included in the name Eli, power, continuous travel, reversible lever, in all some thirty-eight styles and sizes. It is a line that should never be neglected when a purchase is to be made. What has given such thorough satisfaction for so many years at all kinds of baling in all parts of the country is most likely to prove the most satisfactory at this time. If heeded, this word of advice is likely to prove of value to a purchaser not thoroughly familiar with the essential qualities of hay balers. The Eli is advertised in these columns from time to time. The manufacturers will be glad to send catalog and all needed information on request.

THE MAJESTIC



ROTARY WASHER
A HOUSEHOLD NECESSITY.

Made at the most scientific principles, of the best material; with our own patent electrically welded hoops sunk in the wood; it is compact, strong and durable.

Because we are the Largest Manufacturers of Wooden-ware in the World enables us to make the best washer cheaper than others.

Booklets with full description of this wonderful washer sent on application to

The Richmond Cedar Works.

Richmond, Va.

GASOLINE ENGINES SAVE MONEY

Complete information on every detail. \$1.00 per year. Specimen FREE. Free literature, tables and catalogues. A book for Gasoline Engines.

THE GASOLINE ENGINE CO.
200 Blymeyer Bldg. Cincinnati, O.

SAN JOSE SCALE
and other INSECTS killed by
GOOD'S

Caustic Potash Whale-Oil Soap No. 3

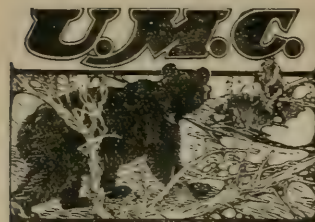
Endorsed by U. S. Dept. of Agr. and State-Examiner Stations. This soap is a fertilizer as well as an insecticide. Sold in 25 lb. kegs, \$2.00; 50 lb. bags, \$3.00; 100 lb. bags, \$5.00; 200 lb. bags, \$8.00; 400 lb. bags, \$12.00. Original Makers, **JAMES GORDON, Philadelphia, Pa.** 959-11 N. Front Street.

Save The Posts

Old field pine made to last longer than cedar or locust by creosoting with dead oil of coal tar. The creosoting of lumber makes it practically indestructible, stops all rot and is absolute death to all insects. Write for prices to the **NORFOLK CREOSOTING CO., Norfolk, Va.**

Chemical Analyses

of MINERALS, FEEDING MATERIALS, WATER and other products made at reasonable rates. Correspondence solicited. **J. B. WEEMS, Ph. D., Crewe, Va.,** Expert in Agricultural and Industrial Chemistry.



Serious Business

facing a bear without U. M. C. cartridges in your gun. They have terrific striking force and are sure fire. Buy of your dealer.

U. M. C. cartridges are guaranteed, also standard strength, and U. M. C. cartridges are used as specimens on labels.

THE UNION METALLIC
CARTRIDGE COMPANY

BRIDGEPORT, CONN.
Agency, 313 Broadway, New York

MONEY SAVED

DO YOU EVER INTEND TO BUY A PIANO? If so, read this and buy now. Never before have you had as fine an opportunity to buy a fine piano at such a great sacrifice of price. We are to take inventory and must reduce our immense stock. Here is your life's chance. Look at these prices:

- A fine \$500 upright.....\$345
- A fine \$450 upright.....\$325.00
- A fine \$400 upright.....295
- A fine \$350 upright.....225

Square pianos at your own prices from \$30 to \$100. Organs from \$30 to \$55. Write us to-day for full information and catalogues.

WALTER D. MOSES & CO.,
103 E. Broad street, Richmond, Va.

ESTABLISHED 1870.

Oldest Music House in Virginia.

FARMERS

Insure Your Buildings.

LIVE STOCK PRODUCE, &c.

Write for booklet giving plan and explaining how you can become a member of the...

Farmers Mutual Benefit Ass'n.

thus securing cheap fire protection. Property insured, \$500,000; average cost per \$1,000 per year, \$4.00.

Memberships and risks limited to Eastern Va.

CHAS. N. FRIEND, Gen. Agent, Virginia Division,
CHESTER, VA.

ORGANIZED JANUARY 9, 1899.

BAGS

FOR EVERYTHING—
NEW OR SECOND-HAND;
SOLD OR RENTED.
Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.

DERICK'S BALING PRESSES.

Men who have carefully and intelligently investigated the merits of the various baling presses offered for sale have arrived at the conclusion that in economy and practical utility Derick's Presses are the best made.

For over a third of a century they have received highest awards and gold medals at the various fairs and exhibitions held in all parts of the world. At the recent St. Louis Exposition both highest award and only grand prize on baling presses were received. Designed and built by the man who practically created the hay shipping industry, it is no wonder they are so highly endorsed, and that there are thousands of satisfied owners of them all over the globe.

A fully illustrated catalogue, showing all kinds and sizes of presses for baling all sorts of products—hay, straw, moss, husks, cotton, wool, etc., and our annual report on the hay crop, of interest to hay growers, will be sent free on request. Address P. K. Derick's Sons, 26 Tivoli Street, Albany, N. Y.

MAGNIFICENTLY ILLUSTRATED CATALOGUE PERTAINING TO ALL KINDS OF NURSERY STOCK SENT FREE.

The Continental Plant Co., Kittrell, N. C., the largest shippers of strawberry plants in the world, have just issued their new catalogue, and they will send a copy free to any address. Being long recognized as leaders in this business, their trade covering the whole United States, there has naturally arisen a demand for them to furnish fruit trees, and they are now able to supply this demand. By selling first-class stock direct to the people and cutting out all intermediate profits, this company enables the nurseryman to save over a half. Growers everywhere should send for their catalogue, and thus keep in touch with a company that sells high class plants and trees at wholesale rates.

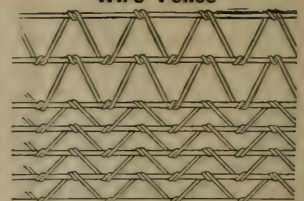
Separate the cockerels from the pullets as soon as they can be recognized. They will thrive far better in flocks by themselves and so will the pullets. Fights will thus be obviated with their possible injuries, which would prevent sales later on. If the habit of fighting has been acquired before the separation, it will continue after.

"This bill," said the chairman of the legislative steering committee, "must not be allowed to become a law in its present shape."

"Why not?" demanded the member that had charge of the bill.

"It's too plain and direct. There is only one possible interpretation of it, and no possible way of evading it. Read it again yourself, man, and tell me, as a lawyer, if you think you could get a case out of it in a hundred years."

THE FIRST Hartman Stockade Woven Wire Fence



Ever built was erected 17 years ago and is still in use as durable and strong as when first put up. The Hartman is a perfectly woven wire fence that is strong enough to keep in the maddest bull and fine enough to keep out the chickens. It is made of the best quality galvanized steel wire and contains much more material than fences more cheaply constructed. That's why it lasts so long. If your dealer doesn't handle it, write for catalogue and prices. Address

GLENN MFG. CO., 103 Mill St., Ellwood City, Pa.
Also Mrs. Hartman Steel Picket Fence, Hartman Flexible Wire Mats and Green Steel Mat.

WIRE—\$1.40 Per 100 Lbs.



Standard galvanized wire, built in 100 foot coils, lengths ranging up to 100 ft. No. 14 gauge, per 100 lbs. \$1.40. Write for prices on other gauges. Galvanized wire, per 100 lbs. \$1.40. Wire galvanized in a box, per 100 lbs. \$1.40. Galvanized wire, per 100 lbs. \$1.40. Inquiry for catalogue No. 1, E. 100 on membership of all kinds from Seattle and Vancouver, B. C.

CHICAGO HOUSE WIRE, 1136 Co., West 4th & Iron St., Chicago



Fence and Gate Posters. The best fence—made strong, of carefully selected, well galvanized steel—most economical to use. The "Jones" are made of best material and give satisfaction. Write for catalogue No. 8, and prices. International Fence Co. 98 Buttes-Ave., Columbus, O.



POULTRY FENCE

that keeps stock out of your poultry yard, stands up stiff on posts and requires no top rail or bottom board. It is our specialty. You can't afford to buy poultry fencing without getting more about the PAGE. Write us.

Page Woven Wire Fence Co., Box 5178, Adrian, Mich.



LAWN FENCE

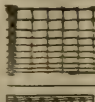
Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Contractors and Churches. Address COILED SPRING FENCE CO., Box 4, Winchester, Ind.



IRON FENCE

LOW PRICES HIGH GRADE CATALOGUE FREE.

DOW WIRE & IRON WKS., LOUISVILLE, KY.



Wire Fence 29c

45-in. stock fence, per 100 lbs. 29c. Includes galvanized steel wire, steel posts, and steel rails. Write for catalogue. No. 1, E. 100 on membership of all kinds from Seattle and Vancouver, B. C.



STONCEST MADE. Bull strong chicken. Sold to the Farmer at Wholesale Prices. Fully warranted. Catalogue free. COILED SPRING FENCE CO., Box 4, Winchester, Indiana.

ENTERPRISE OF YOUNG AMERICA.

A well-known lawyer is telling a good story about himself, and his efforts to correct the manners of his office boy. One morning, not long ago, the young autocrat of the office blew into the office and, tossing his cap at a hook, exclaimed: "Say, Mr. Blank, there's a ball game down at the park to-day and I am going down." Now the attorney is not a hard-hearted man and was willing the boy should go, but thought he would teach the him a little lesson in good manners. "Jimmie," he said kindly, "that isn't the way to ask a favor. Now you come over here and sit down and I'll show you how to do it." The boy took the office chair and his employer picked up his cap and stepped outside. He then opened the door softly and, holding the cap in his hand, said quietly to the small boy in the big chair: "Please sir, there is a ball game at the park to-day. If you can spare me I would like to get away for the afternoon." In a flash the boy responded: "Why certainly Jimmie, and here is fifty cents to pay your way in." There are no more lessons in manners in that office. Brooklyn Citizen.

ESSAY ON TWINS.

Johnny was asked to write a short essay on some interesting experience of his. "Success" tells what he wrote.

"Twins is a baby, only its double. It usually arrives about 4:37 in the morning, when a fellow is getting in his best sleeping. Twins is accompanied by excitement and a doctor. When twins do enything wrong their mother can't tell which of them to lick, so she gives it to both of 'em so as to make sure. We've got twins to our house, and I'd swap 'em enny days for a billy-goat or mose ennything."

PHYSICAL COMFORT OF COWS.

All stockmen know, that whatever frets or worries a cow shortens the milk supply. On the contrary, any device that will add to her comfort helps to increase the flow. An extra two to four quarts a day is the farmer's profit. If the cow is perfectly at ease in the stall, can change position at will and without effort, has no chains or ropes chafing the head or tugging at the muscles of the neck, she will give more milk, and to just that extent increase the owner's income.

In order that the cows may be perfectly comfortable while in the barn, stalls should be provided with the War-riner Patent Chain Hanging Cattle Stanchion, advertised in our columns by Wallace B. Crumb, Forestville, Conn. These stanchions are used by our best dairymen and are highly recommended by them. Write to Wallace B. Crumb for booklet with full information and testimonials. Mention this paper.

Mention the SOUTHERN PLANTER in writing.

AMERICAN FENCE TALKS

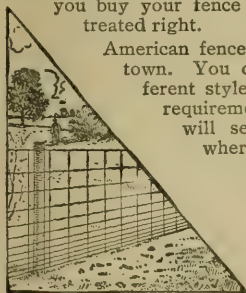
BY THE MAKERS

The structure of the American Fence is perfect. It is built of big, solid, lateral wires, with the upright or stay wires hinged. This is the most perfect structure for a square mesh fence and is covered by patents which cannot be assailed.

There are many fences on the market. Some tell of their wonderfully hard wire; others speak of new forms of construction that make all other forms look ancient and worthless. But through all this it remains a fact that more miles of American fence are in use than of all others combined, and will continue so.

We do not sell direct—we sell through dealers all over the country. Only in this way are the buyers' interests looked after. The dealer becomes your business friend and when you buy your fence of him he will see that you are treated right.

American fence is for sale with the dealer in your town. You can find it there, examine the different styles and make a selection to suit your requirements. Or, write us direct and we will send you a catalogue and tell you where you can get the fence.



The American Steel and Wire Co.

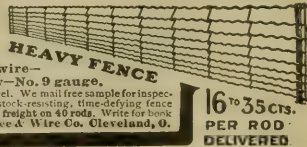
CHICAGO DENVER
NEW YORK SAN FRANCISCO

BROWN FENCE

AN EXTRA HEAVY FENCE
Every wire—

both strand and stay—No. 9 gauge.

Thickly galvanized. Best galvanized. We mail free sample for inspection and test. A more substantial, stock-resisting, time-defying fence was never stapled to posts. We pay freight on 40 rods. Write for book showing 110 styles. Brown Fence & Wire Co., Cleveland, O.

SAMPLE
FREE

16 to 35 cts.
PER ROD
DELIVERED

Northern Virginia Farms

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 16.—130 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$50 per acre.

No. 80.—Contains 130 acres, 6 miles from R. R. Near McAdam, Pike, 75 acres cleared, 55 acres in timber, land is a little rolling, a good quality of red clay, a good young orchard, just beginning to bear. Farm watered by stream and well. Comfortable 4 room house, new granary, stable for 4 horses, 1-1/2 mile to school, 1 mile to Stores, church, P. O., and shops, situated in a good neighborhood. Price \$1,400, on easy terms.

No. 41.—26 acres; 10 miles from Washington, D. C.; 2 miles from an electric and steam railroad. Thirteen room house in nice shaded lawn, 2 cellars, well at house. Nice orchard, in full bearing. All necessary out-buildings in good repair. Price, \$3,500.

No. 43.—30 acres, an elegant brown stone house, with 6 rooms, 2 porches. Three acres young orchard, in full bearing. All necessary out-buildings, in good repair. A large stone mill building, with 2 sets of corn burrs, has 20 foot water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$3,200.

No. 62.—635 acres excellent grazing, cleared land, well set in grass, and a little rolling, 250 acres fine white oak timber, balance of land cleared. Nine room house, bank barn 20x40, sheep house 20x50, and all the usual farm houses, in good repair. Large orchard of all kinds of fruit, in full bearing. Farm watered by springs and streams; water in all the fields; land is all well fenced; has now about 40 large cattle, in addition to sheep, horses and colts. Price, \$16.00 per acre. Easy terms.

No. 63.—515 acres, natural Blue Grass land, well fenced; elegant well water. Good 5 room house, with all the necessary small farm houses in good repair; good sheep barn 20x40. Thrifty young orchard of apples, peaches, pears and cherries. Land is all in grass, except about 40 acres, that is in corn rows. Close to schools, church, mill and post-office. Four miles from railroad. This farm usually sends off from forty to fifty export cattle in September. It is located in a beautiful section of the county of Loudoun, 25 miles from Washington, D. C. Price, \$15.00 per acre; one-third cash.

No. 66.—Large merchant mill, new process, all modern improved machinery, cost about \$14,000, situated in one of the finest grain sections of Northern Virginia, two and one-half miles from railroad. Ample water power all ordinary seasons, but fitted up with a splendid boiler and engine, and power in the event of a drought. For sale to settle an estate. Write for full description. Price, \$7,500, on very easy terms.

Write for full information and price list of other farms.

No. 71.—260 acres; a fine body of white oak timber. This land is just rolling enough to drain well; it is a fine quality of land and is mated to cut from the R. R. This timber is estimated to cut from one to two million feet of lumber to the acre. The land alone is worth more than I am asking for both, and a quick business man can buy this tract and make money on it either the land or the timber. It will not be on the market long at the price I am asking. Price, \$15 per acre.

No. 75.—Contains 60 acres of Good, land Fronting on McAdamized Pike, Land a little rolling, but considered Level, well fenced, about 10 acres in timber, 25 acres to Washington. Thrifty young orchard, apples, peach and pear, good 6 room house. Stable and other out houses all in good repair, 1-1/2 mile from store, P. O., mill and shops, in elegant neighborhood. Price \$1,250.

HINTS BY MAY MANTON.



The blouse that is full below some prettily shaped yoke is a pronounced favorite of the season and has the merit of suiting almost all women admirably well. This one is in lingerie style, made of sheer batiste, with trimming of lace insertion, and is in reality exceedingly simple although it is so designed that it gives a notably dressy effect. *The batiste is always pretty and launders satisfactorily and there are many other materials which might be suggested for the white waist, but the design also suits the wash silks of the season and figured and flowered materials as well as white.

The waist consists of the yoke and the blouse portions, the latter being tucked at their upper edges and joined to the yoke and the seam being concealed by the little frill. The closing is made invisibly at the back and there is a regulation stock collar finishing the neck. The sleeves are moderately full, in conformity with the latest style and are gathered into deep, shaped cuffs.

The quantity of material required for the medium size is 5 yards 21, 4 3/4 yards 27 or 2 3/4 yards 44 inches wide with 7 1/2 yards of lace insertion.

The pattern 5102 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure.

There is no skirt better liked and none more graceful than this one. It is absolutely simple, reducing the labor of making to the minimum while it takes most satisfactory lines and folds. The model is made of royal blue mohair, stitched with belding silk, but the skirt is one suited to all seasonable materials and will be a favorite through the entire autumn and winter. The tiny tucks over the hips give a yoke effect without curtailing apparent height and do away with bulk at that point.

The skirt is cut in five gores that are

SPLENDID FARM AT LOW FIGURES

1,000 acres, well, improved, 5 miles from station, in fine section, \$20,000.

Free, list of 150 select properties. Describe your wants.

H. W. Hilleary & Co.

OFFICE S:

Charlottesville, Va.; Warrenton, Va.; Staunton, Va.

SEND FOR

OUR NEW LIST OF CHOICE BARGAINS IN FARMS, TOWN PROPERTIES, TIMBER LANDS, ETC. We can offer you great bargains in real estate situated in ROCKBRIDGE, BATH AND AUGUSTA COUNTIES. All information cheerfully and promptly answered. Livery, etc., free to those who mean business. J. W. GUINN, Goshen, Va.



LAURENCE CASSELMAN
Formerly Auditor
Herndon, N. D.

Old Virginia Farms

Good Lands, Low Prices, Mild Climate. Send for our FREE ILLUSTRATED CATALOGUE. Largest list of Farms for sale in the State. Let us tell you WHY this is the country for the Northern Farmer. We want to hear from every man who desires to better his condition.

CASSELMAN & CO.
Richmond, Virginia

VA. LANDS and WATERS

Our 10c. map, in four colors, shows a half million acres of the most desirable lands and waters in the United States. Our papers, which we send with the map, are full of Facts, Figures and Features, respecting the Eastern portion of Virginia, Near the Sea, of interest, use and benefit to the Home, Health, and Wealth seekers of the North, East and West, who want to secure homes or investments in a mild and delightful climate. Send 10c. in stamps for copy of map and papers. A. JEFFERS, Norfolk, Va.

Home Seekers and Speculators.

I am in position to show you the largest list of properties you can find in Northern Virginia, consisting of STOCK, GRAIN, DAIRY, FRUIT, POULTRY, TRUCK, and BLUE GRASS Farms, VILLAGE HOUSES and BUSINESS SITES all within 1 to 2 hours of the National Capitol. For free catalogue and full particulars, call on or address W. H. TAYLOR, Herndon, Va.

Virginia Farms

MOST SELECT LIST, and in all sections of the State.

FREE CATALOGUE.

R. B. CHAFFIN & CO., Inc.

Richmond, Va.

W. E. MILLER, Herndon, Va.

shaped to give generous fullness on the lower edge.

The quantity of material required for the medium size is 8½ yards 21, 7½



54 1/2 inch wide Tucked Skirt
27 to 29 waist

yards 27 or 4¾ yards 44 inches wide.

The pattern 5414 is cut in sizes for a 22, 24, 26, 28 and 30 inch waist measure.

We can supply these patterns at 10 cents each.

Southern Planter,
Richmond, Va.

HOW \$106.00 PROFIT WAS MADE BY L. P. ADAMS, HOWARD, KANSAS.

"My stallion got kicked on hock and it enlarged. Everyone said he was ruined. You advised me to use ABSORBINE. I got two bottles and today you can't tell which leg was hurt. It made me \$100.00 per bottle. I am much obliged for the advice." Absorbine is \$2.00 per bottle, at your druggist, or I will send a bottle express prepaid upon receipt of price. W. F. Young, P. D. F., 109 Monmouth St., Springfield, Mass.

It was a house with a balloon frame, standing on cedar posts. A fierce tempest from the north had struck it just after the roof had been put on and the weather-boarding finished, and had pushed it five feet out of perpendicular.

The owner was sitting on the front step, calmly smoking his pipe, when the traveller happened along.

"Had a stroke of back luck, haven't you?" said the traveller.

"Yep." (Puff.)

"Building would have stood it all right if it had been finished, wouldn't it?"

"I reckon so." (Puff, puff.)

"Going to tear it down and build it over again?"

"Nope." (Puff.)

"May I ask what you intend to do with it?"

"Nothin'," answered the owner, removing his pipe from his mouth. "Goin' to wait for a hurricane to come from the other direction and straighten it up again."

Spandido Farms

in Northern Virginia. Near the great markets.

No. 1. Fine fruit farm; 100 acres, in the corporation of Fairfax. Has 1,100 peach trees, 4,000 of the very best grape vines, and all other kinds of fruit and berries. 9 room frame house, large fire barn and all out-buildings and well. Stream through farm. Just one mile from electric cars. The trees are all in full bearing, and the fruit will pay for the place in a short time. This is a bargain. Price, \$6,500 cash.

No. 4. 100 acres, one of the finest farms in Virginia, in the very best of cultivation; fine, large 12 room house, large halls and cellar, water in the kitchen, beautiful lawn surrounded by hedge, all kinds of fruit and berries; very large barn and all out-buildings; first class fence all around the farm, divided in fields for pasture, meadow, etc.; stream through the farm; near the town of Vienna; steam and trolley lines. Price, \$17,000; part cash, balance to suit. Would take city property in part pay.

No. 6. Fine dairy farm, 46 acres, all clear and in high state of cultivation; three-fourths of a mile from Vienna; steam and electric cars, stores, churches, mill and school; 12 room house, 2 large barns and all necessary out-buildings; 2 good wells; all kinds of fruit and berries. Price, \$6,000; terms to suit.

No. 7. Good dairy farm of 102 acres, in cultivation and grass; all kinds of timber; well watered; 8 room frame house; barn 35x50; well fenced; all necessary out-buildings; one and one-fourth miles from railroad station, school and mill; all kinds of fruit. Price, \$5,000; \$1,000 cash, balance to suit.

No. 8. Nice home and farm of 50 acres; 40 acres clear and in high state of cultivation; 5 room house, large, new barn; all other necessary buildings; well of water at door, spring near by, and stream through place; all kinds of fruit; 2 miles from Fairfax, school, stores, churches and electric cars. Price, \$3,750, on easy terms.

No. 11. 450 acres; 350 in cultivation, balance in fine timber; 9 room house; well at door, spring near by, stream through farm; 2 large barns; all other necessary buildings; also tenant house. This is a fine farm for dairy and stock, one and one-half miles from Clifton Station, on Southern Railroad, school, church and stores. Terms, \$30 per acre; one-third cash, balance to suit.

No. 12. 16 acres; 14 acres cleared, balance in timber; 2 room house, barn 4x14 and other out-buildings; spring near by, all kinds of fruit; near school, church and store; three and one-half miles from electric railroad. Price, \$550; terms to suit.

No. 13. 300 acres; 100 cleared, balance in oak timber; 3,600 peach trees and other kinds of fruit; 6 room house; barn 28x40, all other buildings necessary; one-half mile from railroad, school, store and church. Price, \$6,000; one-half cash, balance to suit.

No. 14. 30 acres; 11 acres cleared, balance in oak timber; 30 pear, 100 peach, and 10 apple trees; stream through place; near Fairfax, stores, church, school and electric railroad. This is a fine place for a barnyard or play. Price, \$3,000, on easy terms.

No. 15. 27 acres of the land; suitable for subdivision as it is so near the electric railroad. This also building sites, in the Corporation of Fairfax. Near school, church and store. Price, \$2,700; one-third cash, balance to suit.

No. 16. 148 acres; 75 clear, balance in all kinds of timber; 5 room house, small barn, hen house and meat house, is well watered. Good fences, all kinds of fruit; 3 miles from Fairfax and Clifton Stations. Mill near place. School near by. Price, \$2,000; one-half cash, balance to suit.

No. 17. 125 acres; 65 clear and in good condition, balance in all kinds of timber; 7 room

house; good barn and all other necessary buildings; water in every field; good fences; all kinds of the very best varieties of fruit; 3 miles from Fairfax and Clifton Stations; near school and church; mill adjoins farm. Price, \$2,500; \$1,000 cash, balance to suit.

No. 18. 120 acres; 12 acres clear, balance in all kinds of timber; 2 room house and stable; spring and running water; partly fenced; half mile from station, school, church and store. Price, \$11 per acre; one-half cash, balance to suit.

No. 21. Very cheap farm of 100 acres; 90 cleared and in cultivation, balance in timber; 7 room house; small barn and cow shed; water in every field; good fences; all kinds of fruit; 1 mile from church, school and store, 3 miles from railroad. Price, \$1,800; terms to suit.

No. 24. Timber tract, 21 acres; one-half mile from Oakton and electric railroad. Price, \$50 per acre, cash.

No. 25. 44 acres; 35 acres clear, balance in timber; good 9 room house, with cellar; barn 30x24; large shed, corn house, hen house and carriage house. Lasting water in every field, and good spring near house. Fenced with wire and rail; in the town of Legato; near school, church, store and post-office; 3 miles from electric railroad. Price, \$2,500; terms to suit.

No. 26. 200 acres of fine land under high state of cultivation; 7 room house, with water, bath and sink; summer kitchen with water, bank barn 16x30; all necessary out-buildings; 200 fruit trees in full bearing. Place well fenced with wire; beautiful lawn, with abundance of shade trees and shrubbery. Price, \$4,000; \$1,000 cash, balance to suit; purchase.

No. 33. 150 acres; 75 cleared, balance in timber; 4 room house; small barn and other buildings; well watered; all kinds of fruit, good spring near house, school, store and post-office; 6 miles from railroad. This is a cheap place. Price, \$1,500; one-half cash, balance to suit.

No. 40. 27 acres; about 10 cleared, the balance in pine; 5 room house; spring near, two streams through the place; partly fenced; some apple trees; one-half mile from school and church, two and one-half miles from railroad and store. Price, \$500. Terms: \$150 cash, the balance to suit.

No. 50. Over 200 acres; 100 cleared; large new house not finished; a noted fine spring; stream through the place; a mile from Legato, on Warrenton pike; one and one-half miles from Greenlawn school, church and store. Price, \$2,000. Terms to suit.

No. 55. 140 acres; 70 clear, the balance in all kinds of timber; 5 room house, barn 30x40; fine spring; water through the place; all kinds of fruit; 3 miles from railroad, and 3 miles from electric railroad, three-fourths of a mile from school, church and store. Price, \$2,500. Terms: one-third cash, the balance to suit.

No. 73. 147 acres; 25 clear, balance in timber; 1 mile from store, post-office, etc.; one-fourth mile from school. Price, \$100. Terms: \$250 cash, the balance to suit. This property is in a nice neighborhood. I think it is a great bargain.

No. 78. In Prince Georges county, Md. 61 acres; 5 to suit house, small barn and other out-buildings; 7 miles from Washington, D. C., and 5 miles from electric car. Price, \$2,000.

No. 97. 200 acres; 50 clear, and balance in timber; has a good building site; could be made a nice farm; one and one-half miles from Fairfax on the pike. Price, \$25 per acre, on easy terms.

No. 98. 54 acres; 10 cleared, balance in wood; near Pender. Price, \$10 per acre on easy terms.

Send for full list of my great farm bargains. Inquiries cheerfully answered.
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with improvements. Much land now being worked has paid a profit greater than the purchase price the first year. Long Summers, mild Winters. Best shipping facilities to great eastern markets at lowest rates. Best church, school and social advantages. For list of farms, excursion rates, and what others have accomplished, write to-day to

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Stock Farm

of 1,000 acres, half in valuable timber; 90 head of high bred cattle, must be sold regardless of price on account of poor health; convenient to river and R. R.; nicely located, annual pasture.

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HOW TOOLS SHOW THE COUNTRY'S PROGRESS.

This country of ours is the land of progress and improvement—the land of hustle and go—the grand country where all men are striving to do their particular work better than it was ever done before.

Modern improvements are taking the place of old-time makeshifts. Many wonderful machines make work easier than it used to be in the days of old. Countless little conveniences have been invented for lightening labor and easing work. All these inventions and improvements are the result of that constant striving—so characteristic of the American people—to do things better than they were ever done before.

As an instance of this vast improvement over the old order of things, take the case of tools. In the days of our grandfathers, if a man wanted an axe he hitched up his horse, drove to the store, looked over the stock of axes and tried to pick out a good one. Maybe he got an axe that would cut—more likely he didn't. He had no certainty—no guarantee.

Same way with a saw, a chisel an adze, a plane, or any other edged tool. Thirty-six years ago, however, this country began to produce the best tools made. At that time the Simmons Hardware Company began to put out their famous line of "Keen Kutter" tools under the trade mark and motto, "The Recollection of Quality Remains Long After the Price is Forgotten."

Year by year, countless improvements in this line have been made until to-day it is possible to go to any store for any tool you want and be sure you are getting a tool made of the most perfectly tempered steel, by expert toolmakers, by simply asking for the "Keen Kutter" brand.

Yet "Keen Kutter" tools cost but a trifle more at first than inferior tools and are far more economical in the end.

If your dealer does not keep "Keen Kutter" tools write the Simmons Hardware Co., St. Louis, Mo., or 298 Broadway, New York, who will see that you are supplied.

A GRAIN SAVER.

A few horses have a disagreeable habit of rooting the grain out of their box onto the ground or into the manger, thus wasting a large part of it. One of the best devices I have ever found to remedy this is to drive two or three big spikes into the bottom of the feed trough, but do not drive clear down. Leave them sticking up a couple of inches into the box, and the horse will strike his nose against these as he tries to throw out the grain, with the result that in a few days he will stop the practice and eat his feed quietly and without waste. If the spikes are left about six inches apart, he can readily eat the grain around and between them, and it will be no cruelty, but a real benefit to him.

North Dakota.

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Where Health, Climate, Soil, Location and markets are unsurpassed. Any size, place and price to suit the buyer of a stock, truck, fruit, poultry or fish and oyster farm. The James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 36 P. pamphlet giving full particulars.

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The woman who "sits back" is generally the woman with pimples or unsightly eruptions. Get in the beauty row by cleaning up the face with

HEISKELL'S OINTMENT

the magic healer of all skin diseases—with a half century record of miraculous cures. Removes ugly blotches, roughness or redness of the skin, and heals all scaly, tettery eruptions. After the cure Heiskell's Soap will keep the skin smooth and fine. Heiskell's Blood and Liver Pills are especially recommended for use with the ointment and soap. They act on the blood.

Ointment 50c a box. Soap 25c a cake. Pills 25c a bottle.

Sold by all druggists or sent by mail.

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Wonderful Skin Remedy.

"I feel like I owe this much to my fellow man: For 7 years I have had eczema. I have tried many doctors and numerous remedies, which only temporarily relieved. I gave 'Tetterine' a trial and after 8 weeks am entirely free from the terrible eczema. It will do the work." J. S. Giddens, Tampa, Fla.

At drug stores, or send 50 cts. for box to J. T. Shuptrine, Savannah, Ga.

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and Whiskey Habits
cured at home without
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sent FREE. H. M.
Woolley, M.D., Atlanta, Ga., 103 N. Pryor St.

WASHINGTON NOTES. SCHOOL GARDENS.

The Bureau of Plant Industry of the Department of Agriculture, is just issuing a very attractive, illustrated bulletin on school gardens. In his introductory, Dr. Galloway, Chief of the Bureau, says, that as agriculture in its broadest sense is the primary basis of wealth in the United States, it seems essential that efforts should be made in our general educational system to bring early to the mind of the child, facts which will be of value as emphasizing the importance and necessity of agricultural work. There is no better way to do this, he says, than through a well managed and well conducted system of school garden training which early awakens interest in an industry which means much to the future prosperity of the country.

When the work of handling congressional free seed distribution was turned over to the Bureau of Plant Industry, several years ago, efforts were made to arouse interest on the part of members of Congress with large city constituencies, who might be able to encourage the school garden movement through the distribution of specially prepared seed packages. Since then, millions of packages of seeds have been distributed in this way in the cities, and the result has been that much school garden work has been organized and thousands of pupils have learned something of growing plants.

A small tract of land back of the Department of Agriculture Building has been set aside for model school garden work.

The bulletin in question has illustrations of a number of successful school gardens, in various cities, and has plans outlined for carrying on such work. The following interesting paragraph is quoted from the bulletin, on the work at Hampton Institute, Va.:

"When it was announced two years ago to the children of the Whittier School that they were to be taught gardening on a two acre tract, the news was received with mixed feelings. While the little ones were pleased, the older girls thought it a disgrace to work in the fields. After two years there are no pupils in the school who do not look forward with eagerness to this work. If it is necessary to be absent from school, they think it must not be on gardening day."

THE TOGGENBERG MILCH GOAT.

It seems that a great many Americans who have been reading of the efforts of the Department of Agriculture to introduce milk goats into this country have been writing to the American Consul-General to Switzerland.

Consul-General Peters has transmitted to the Government a report on the value of the Toggenberg goat, prepared at his request by the Director of the Swiss Department of Agriculture. The milk of the Toggenberg goat, it is stated, is rich in quality and keeps quite as well as cow's milk. It sells in Switzerland for about 3½ cents a quart. The

CAREFULLY conducted experiments, ranging over many years, have proved conclusively that the liberal use of POTASH is essential to the production of big yields of full-eared corn.

Let us send you our practical books telling of these and many other careful crop-feeding tests; they are free to farmers without any cost or obligation. Send name and address.

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9.50 per cent.	18.50 per cent.	20.50 per cent.
20.50 per cent.	Bone Phos. 50.00 per cent.	8.30 per cent.
8.30 per cent.	Ammonia 3.60 per cent.	2.00 per cent.
2.00 per cent.	Potash 4.25 per cent.	9.00 per cent.
9.00 per cent.	Phos. Acid 23.00 per cent.	28.00 per cent.
28.00 per cent.	Organic Matter and ammonia Salts 13.00 per cent.	

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Manufactured
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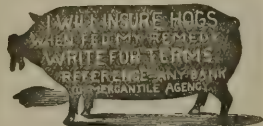
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Cash for Hogs that die.



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PRICES: 25-lb can, \$12.50; half can, (12 1/2 lb.) 75c; at below prices, and will give same 50 cents each. None genuine without my signature on packages or can label.

FREE TRIAL FOR 30 DAYS.

Any reader of this paper who will remit direct to me for a can or half-can of my Remedy at below prices, and will give same a fair trial for 30 days, may have his money refunded if at the end of that time he is not satisfied that his hogs have benefited, that the Remedy will do all that is claimed for it and that it is the best hog remedy he has ever used.

HOG BOOK FREE.

Latest revised edition, "Hogology," my book about hogs, will be sent FREE if you mention the Southern Planter when asking for it. Many new and important subjects have been added and every phase of swine raising, from start to finish, is covered in a thorough and practical manner.

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Virginia Farms.

Farms of any size with improvements.

Prices in reach of all. Free list.

PORTER & GATES, Louisa, Va.

food of the goat in summer consists of grass and shrubs, but in winter, if it is desired to have milk rich in quality, the goat should be fed a small quantity of grass and hay and the temperature of the stable kept somewhere between 57 and 62 degrees. A sufficient acreage of grazing land for one cow will support from 6 to 8 goats and one man can manage 40 or 50 goats. The milk of the goat makes an excellent cheese and fairly good butter and while cow's milk is more popular, yet goat's milk is found to be in greater demand for children, as tuberculosis is never found in this hardy animal. Young goats from 5 to 12 weeks old furnish a very excellent quality of meat, which in fact is often substituted for venison. If well cared for, the Toggenberg goat will give milk from the first to the tenth year, and this eight months in the year.

However, it might be added, the Department of Agriculture is carefully watching the importation of goats from Switzerland owing to the prevalence of the foot-and-mouth disease in that country. In order to protect the American live stock industry from the importation of this dreaded disease into America, the Department of Agriculture has established a quarantine station on one of the small islands in New York Harbor, where all milch goats imported will be detained for sufficient length of time to determine whether or not they are affected with this malady.

SEASONING FARM IMPLEMENTS.

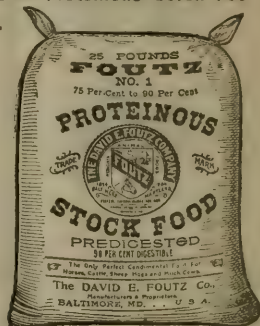
Now is the time to leave all mowing machines, harvesters, and other horse implements out in the field to obtain the benefit of the fall weather. Flows and harrows will, of course, be needed yet and these can be kept under cover for a while, but can be left out later after the fall plowing. This practice of fall weathering of implements is quite general in many farming sections and is encouraged year by year by a large class of farmers. It insures proper weathering of the wood and secures to the metal parts of the machinery a fine brown color. The practice is an entirely satisfactory one to the implement manufacturers, as a class.

DRYED LIMAS AND CORN.

It was a great mistake not to plant enough lima beans and sweet corn to have an ample supply for drying for the winter's use. Each of these vegetables can be easily cured by drying and will furnish, for the winter's use, as wholesome and palatable a dish as the vegetables during the growing season. Dried lima beans, of course, are a staple commodity, but the ones in market are the matured beans which have been allowed to ripen in the pods and dry on the vines. They make a wholesome dish but are very heavy and not particularly sweet, lacking almost entirely the fine flavor of the fresh limas. On the other hand in picked and shelled green, the same as though for immediate cooking,

Mr. Farmer! How is this?

We Guarantee
Foutz Proteinous Stock Food



to contain 75 to 90 per cent. Pure Protein, being 13 times as much as Oats, 15 times as much as corn and more than 5 to 10 times that contained by any advertised condimental Stock Food. It has an actual nutritive value of 5 1/2 times Oats and 6 1/4 times corn. It is the easiest, CHEAPEST, BEST and only absolutely reliable way to balance your animal's rations.

Send for "Proteinology" free to Stock Owners. THE DAVID E. FOUTZ COMPANY, Baltimore, Md.

Agricultural Lime

50 Cts. Per Bag.

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\$1.50 Per Bag.

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Any person, however inexperienced, can readily cure either disease with

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Fistula and Poll Evil Cure—even had old cases that skilled doctors have abandoned. Easy and simple to use; requires just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in

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Will reduce inflamed, swollen joints, Bruises, Soft Bunches, cure Boils, Fistula, or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. \$2.00 per bottle delivered. Book 8-B free. **ABSORBINE, JR.**, for marking, \$1.00 per Bottle. Cures Varicose Veins, Strains, Bruises, Etc. Mid.

W. F. YOUNG, P. D. F.

109 Monmouth St., Springfield, Mass.

Mention THE SOUTHERN PLANTER in writing.

and then dried in the sun, they will retain their sweetness and flavor and when cooked be practically as fine a dish as fresh beans.

Dried sweet corn has become almost an unknown commodity since such cheap canned corn has been put upon the market. Almost the same thing can be said of dried sweet corn that applies to lime beans. If harvested at just the right age and boiled and cut from the cob as though to be eaten and then dried in the sun, corn will keep indefinitely and be exceedingly sweet and wholesome, which can not be said much of canned corn offered for sale.

USE OF HORSEFLESH IN GERMANY.

Through the considerable increase in prices of beef, mutton and pork throughout the German Empire, attention has been drawn to the fact that the use of horseflesh in that Empire as an article of diet is increasing. In Berlin there are 200 slaughter houses for horses, and in the suburbs 50, employing in all about 1,000 men. It is understood that the Berlin municipality intends shortly to provide a large central slaughter house. A great delicacy in Hamburg and one of its best known meat products is horseflesh sausage. The industry has been in existence for about 50 years and considerable quantities of this sausage are exported as beef sausage. Over 6,000 horses are slaughtered every year in Hamburg for food. Scientists claim that it is only sentiment alone which prevents horseflesh from being sold in larger quantities than it is at the present time. The flesh of the horse they state, is more free from parasites than beef or pork and is richer in nutriment. In Berlin a short time ago a prominent restaurant proprietor gave a banquet to which he invited fifty of his friends. At the feast, dishes of beef and horseflesh were served, and out of the fifty guests present, only six were able to distinguish between the roast beef and the roast horse.

GUY ELLIOTT MITCHELL.

SPRING CARE OF PLUM TREES.

It is a common complaint that "plums drop"; yet by exercising two precautions they are one of the easiest fruits to grow.

Mulch with coarse horse manure in March. This keeps frost in the ground later, retarding the swelling of the buds so early as to be blighted by it. Later the coarse litter can be raked away, allowing the fertilizing material to enrich the soil about the roots.

For curculio, spray with Paris green or London purple, (the former is less apt to burn the foliage), just before the buds open, just after the petals fall, and a third time two weeks later. Happily, the bees are not endangered by this method. If young trees are frequently jarred, the insects may be caught in sheets spread for the purpose.



**Warranted
to give satisfaction.**

**GOMBAULT'S
CAUSTIC BALSAM**

A safe, speedy and
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All who desire to keep consumption from their homes, children or friends, or save care of those already afflicted, should write for free directions to the

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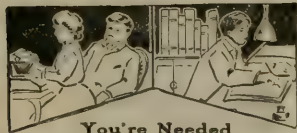
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Contains valuable information concerning the Culture of all varieties of Nuts.

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Remittance can be sent to The Southern Planter or to the AMERICAN NUT JOURNAL, Petersburg, Va.
Sample copies upon request.

Always mention the Southern Planter when writing advertisers.

THE HARVEST TEACHES A LESSON.

The great harvest that has been gathered this year has done something more than swell the farmers' bank accounts temporarily.

It has been an education. Like all other great harvests it has taught its lesson to those who had not prepared themselves properly for taking care of it and are now regretting their lack of foresight and making new resolutions for next year.

In spite of the universally heavy crops there are many farmers who are disappointed in the season's work, and it is safe to say that the fault, in ninety-nine such cases out of a hundred, can be laid at the door of imperfect machinery. Breakages, long delays for repairs, or faulty operation in any kind of harvesting machinery cuts deep into the profits.

Every hour lost when the meadows or grain fields are ripe runs into money mighty fast, and every farmer ought to realize the great importance of guarding against emergencies in every way possible. There should be no guess work or experimenting in connection with your farm machinery equipment, and while you may feel reasonably sure that everything is in good order, accidents will happen and you should see to it that facilities for quick repairs of all kinds are close at hand.

The corn is still standing, and those with a crop of any size to cut might take a suggestion from this and overhaul their corn harvester. Since the plants contain 40 per cent. of the feeding value of the whole crop, and as it is necessary to cut it just in the nick of time in order to keep all the valuable nutrients stored in the stover, no one can afford not to be properly prepared to go over the field without delays.

As we said before, the big hay and grain crops caught many farmers unprepared, and the corn growers should be able to profit by their experience this year. We can not impress too strongly upon our readers the true economy of complete machinery equipment and the wisdom of buying those machines which not only offer every advantage of superior quality, but also afford you the important advantage of being able to get repairs in the shortest possible time.

A good, substantial, standard line, such as the International Harvester Co. manufactures, offers the opportunity of securing both of these advantages, and yet, owing to their remarkable facilities for keeping down the cost of production, these advantages cost the farmer nothing. For instance, if you buy a binder, mower, header, or corn harvester from the International Harvester Company, you are sure that you have a perfect machine to start with and that even if an accident should occur while you are in the midst of your work, you can go to a nearby dealer and secure any necessary repairs.

This company has a representative, carrying a complete supply of repairs

It Feels Good

on your face and your face always feels soft and smooth, if you use

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Sold everywhere. Free trial sample for 2-cent stamp. Write for "The Shavers Guide and How to Dress Correctly."

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Calendar
Watch
keeps cor-
rect time
and gives
day of
Week,
Month,
changes
of Moon.

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by Christmas, an honest, sober man to take charge of grounds, garden, dairy and poultry on a farm in Albermarle Co., Va. Must be married and willing to work. Address, R. care of Southern Planter.

FARM FOREMAN.

Wanted, white man, unmarried, on a stock farm in Southside Virginia, January 1, 1906. One who is accustomed to handling stock. Colored labor employed. Address in own handwriting, stating age, experience, wages desired, nationality and references, 'Merrill' c/o Southern Planter.

WANTED

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ANY KIND—ANY QUANTITY—ANY WHERE.

1 Pay Freight. Write for Prices.

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Reliable SEEDS

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for each line they manufacture, in nearly every community in the country, and this policy of quick service is making them thousands of new and staunch friends every year. Compare this convenience with having to send to some distant manufacturer every time a little something goes wrong, and having to hold your work indefinitely. You see what a close connection there is here with your pocketbook.

The same holds good with the whole line of farm machinery manufactured by the International Company, including, in addition to those machines already mentioned, Hay Balers, Shredders, Gasoline Engines, Wagons and Manure Spreaders. If you do not know the representative of this company in your neighborhood, you can write to the home office in Chicago and they will send you a letter of introduction and any other information you desire.

POORLY GALVANIZED FENCES.

We hear so many complaints the past few years about Galvanized Wire not being so "lasty" as the wire furnished some years ago that this question seemingly has become serious and of vital interest to every farmer.

As considerable money is now spent by the average farmer for fences, it would seem good judgment to thoroughly study the fence question before buying, with a view to securing the very best article made, and to know that it is heavily galvanized and weather proof.

The Brown Fence & Wire Company, of Cleveland, Ohio, whose advertisement appears in this journal, claim to make a heavy weight farm fence, using all No. 9 Coiled Spring Steel strand wires with No. 9 Stay wires and all wires containing an extra heavy coating of galvanizing.

We advise our readers sending for this company's free illustrated catalogue, also a sample of their fence, which they mail free. Their catalogue is interesting to fence buyers and complete with fence facts.

Manager Cyrus T. Fox, of the Roanoke, (Va.) fair, mourns the loss of his second son, Harry B. Fox, who died in Philadelphia on the third of September after an illness of only three days, of acute gastroenteritis, aged 28 years. He was on the staff of the Philadelphia Press at the time of his death, occupying a prominent position. He had previously been connected with the Reading (Pa.) Herald for six years. He was known as a bright newspaper man. He was born in Reading, Pa., where his remains were interred on September 6th. In the middle of August Mr. Fox was a member of a Virginia house party for a week. He had many friends in this State.

The YOUTH'S COMPANION continues to delight the youth of both sexes and hold the interest of the old folks as well.

THE COSMOPOLITAN delights its readers with various topics and illustrations.

"Paste this in your Kennel Book."

"Llewellyn Setter," At Stud, Fee \$15.

COUNT'S ROWDY, by Lady's Count Gladstone, dam Jesse Rodfield. F. D. S. B. 1894; A K. C. S. B. 64377

Forty years ago, Mr. Purcell Llewellyn of England established the breed of "Llewellyn" Setters, with his dogs "Duke" and "Rhoebie" (with a Laverack cross). A pure "Llewellyn" must trace back in an unbroken line to these two dogs "Champion Count Gladstone IV," and his son "Champion, Lady's Count Gladstone," are the most "dynamic" sires of late years, producing more Field Trial Winners of class, and the greatest dogs in America. Jesse Rodfield has proven herself the greatest dam of the day. She is the mother of Champion Prince Rodney, that Mr. Chas. B. Cooke sold for \$1200 last fall, and of the Field Trial winners, Jesse Rodfield's Count Gladstone, Count Whitestone, Count's Lit, Count's Blackie and Sure Shot. Count's Rowdy is a full brother to these dogs; a topnotcher afield, of good looks and a lovely disposition. Prove what I say by asking the best authority, The American Field.

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"Mack's Pride"

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White, blue belton and tan ticked.

The last and best of the celebrated Ch. Cincinnati Pride—Brown's Queen Vie strain. Full brother to seventeen field and bench winners.

Sportsmen of the South will find in this dog perfection of breeding, conformation and shooting qualities, and a proven transmitter of the two latter. Nothing better with which to breed up the native or too inbred Llewellyn setters. Correspondence solicited. Fee, \$10.

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2 Setter Dogs,

1 yr. old, Price \$15 each; 1 Pair Young Fox HOUNDS, 1 Pair BEANLE HOUNDS, \$10 per pair; MAM. BRONZE TURKEYS, "Gumbos," hens \$3, Toms, \$5; Plymouth Rocks, Thompson-Hawkins Strain, \$1 each. ROBT. B. TAYLOR, Cedon, Va.

PEDIGREED

SCOTCH COLLIE

(female) and prize-bred SETTER, both thoroughly trained, for Sale.

L. E. BENNETT, Hollins, Va.

Irish Setter

Pup (male) wanted; must be solid red in color and not under 3 mos. old. Address, J. H. FLEMING, Kensington, Ga.

WANTED

A NICE WHITE GIRL in small family, good home and no cooking. Address, Mrs. "A," care "Southern Planter."

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I offer a fine lot of whole root trees

APPLES, PEARS, PEACHES.

CHERRIES, PLUMS, GRAPE VINES,

RASPBERRIES, ETC.

Save agent's commission by sending your orders to this nursery.

CATALOGUE FREE.

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as Superintendent of Poultry plant, or will care for Stock and poultry; can do general building and repairing; prefer to locate in Piedmont Section; references furnished.
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With several years' experience on James River low grounds, desires position on some place which is not for sale. FARMER, care Southern Planter.

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LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Sulphurets, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

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718 Twelfth St. N. W., Washington, D. C.

20 to 30

Goats Wanted.

Write, giving price, age and breeding to E. L. DOUGLASS, Fabers, Va.

Kentucky Jacks

Kentucky Registered mammoth jacks and jennets, also Spanish bred jacks. Some nice saddle Stallions and Poland China Hogs.

J. F. COOK & CO.,
Lexington, Ky.



THE LABORER IN THE SUNNY SOUTH.

Editor Southern Planter:

In no other portion of the United States can the laborer be fed, more liberally or at less expense, than in the Sunny South. The "bill of fare" among the colored laborers on the farm, is, at the present time, sweet potatoes, corn bread, and hog meat. Cheap and most excellent fish are always to be had, for variety, and nearly every farm laborer has his chickens and eggs, and now and then one has a cow.

Sweet potatoes are rarely worth more than 1.00 per barrel, so that if the laborer does not grow them himself, he can easily purchase enough to carry him through the winter. He can easily fatten a couple of pigs and raise a little patch of corn, so that his three staples, above named, are assured, and hunger will be an unknown quantity in the hut of the poorest darkey in Virginia.

The average colored laborer in the country has his own little "patch" in which he grows his "garden sass," and his potatoes, and manages to keep a few head of poultry. Such laborers, even if they do work at low wages are far, far, more independent than the higher paid laborers at the East, West and North.

The "bill of fare" above mentioned is not to be scoffed at. Take the average hard-working man anywhere, and give him his breakfast of a big sweet potato, say as big as his foot, a chunk of corn bread, cooked as the Southern cook knows how to cook it, and a slice of well cooked bacon to match, and a cup of coee, and it makes as "satisfying" and as "filling" a meal as one can ask. It is palatable, healthful, sustaining, and satisfying. It is grown at home excepting the coffee, and we are quite sure that the laborer would be benefitted by taking water in place of the coffee, or better yet, take milk in case he kept a cow.

Starvation or hunger never stares the Southern laborer in the face. The climate and the soil are both wonderfully kind to him who is willing to do a little work.

Mankind in the United States, may be divided into three portions or subdivisions, viz.: "Classes," "Masses," and "Asses." The "Classes" are those who by accident or design, have accumulated wealth, and who have gone into their holes, so to speak, and have hauled the holes in after them, in order to keep others out. The "Masses" are those who toil ceaselessly, and who have hard work to hold their own from year to year, a majority of whom are less able and more dependent each year.

The "Asses" are those who have it in their power to better their condition by securing homes in a milder climate, where it costs less to house, feed, clothe, warm and sustain their families than it does in a cold and unfriendly clime, but who lack the courage to make the move.

We are not alluding now to the laborers in the cities, but to the labor on

Lynnwood Stock Farm

has maintained its supremacy in the prize ring as usual as attested by the Horse Show record in the draft classes, as the Percherons winners, 16 in all, with two exceptions, were products of the Lynnwood Stock Farm.

VERY LOW PRICES WILL BE GIVEN ON SHORTHORNS, BERKSHIRE HOGS, and PERCHERON HORSES.

Come and see the stock it pays to breed and feed JOHN F. LEWIS, Lynnwood, Va. "Lewis" Station, N. & W. R. R.

FINE STOCK FOR SALE

1 extra fine black saddle horse 7 years old; very stylish and handsome, weight, about 1200 pounds; perfectly reliable in all harness. I don't believe there is a better horse in Virginia.

1 registered O. I. C. Boar, 12 months old; well grown, and a beautiful hog.

2 Berkshire sows 24 months old, with pig, by a registered O. I. C. boar. A fine lot of thoroughbred O. I. C. pigs, both sexes, at reasonable prices.

75 and 15-16 GRADE ANGUS BULL and Heifer Calves.

1 BULL CALF out of Shorthorn Cow, by Angus Bull.

Several fine family milk cows, fresh.

Several registered Angus bull and heifer calves.

9 beautiful pure bred Llewellyn Setter pups for sale at \$5 each. None better at any price.

SILVER LACED WYANDOTTE eggs, \$1 for 15.

W. M. WATKINS & SONS, Saxe, Va.

JACKS, JENNETS and STALLIONS.

Fine JACKS a Specialty. 3 to 5 years old past; write for what you want.

W. E. KNIGHT & CO.,

Nashville, Tenn., R. F. D. 5



A HIGHLY BRED

KENTUCKY JACK

for sale; black with white points, 15-16 hands high, weighs about 1,000 lbs., large bone, reputation as first-class Sire, has plenty of 16 hand colts, 10 years old, sound as a dollar, small boy can handle him.
J. W. BETHELL, Spray, N. C.

Jacks, Jennets and Mules.

A fine lot of Kentucky bred and big black Spanish jacks and jennets. Also mules, Match teams, one to six years old. Write or see me before you buy. Come to Kentucky if you want a good jack.

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TO REDUCE MY STOCK
before col. weather I
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TO Q CK BUYERS.

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Alh bir... strong and healthy.
Dr. H. H. LEE, R. F. D. 4, Lexing-
ton, Va.

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White Wyandottes, White

Leghorns, Barred Plymouth Rocks.

A number of fine WYANDOTTE and
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S. C. Brown and White Leg
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for sale. Eggs in season.

Write for prices. RIVERSIDE

POULTRY FARM, J. B. COFFMAN &
SONS, Prop'rs., R. F. D., 19, DAYTON, VA

**50 Barred and White
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Cockerels for sale. AMER-
ICAN BEAUTY strain. Eggs
CYPHERS

MODE INCUBATOR and CONKEYS
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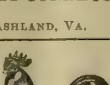
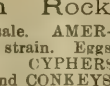
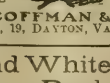
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TO ADVERTISE STOCK

We offer the finest lot
of S. C. B. L. gorn Cock-
erels we have ever seen,
at \$1 up. Also a few
Barred P. Rock Cockerels
at bargain prices. All
line bred from first prize
winners at leading shows.

Strawberry Hill Poultry Yards,
Box 287, RICHMOND, VA.

Mention THE SOUTHERN PLANTER in
writing.



the Southern farm. The Southern farm
laborer, white or colored, lives cheaper,
and can live better than the farm laborers
in any other portion of the United
States.

Fish, oysters, clams, and crabs, are
within reach of all, who live near the
sea. Corn bread, sweet potatoes, pork,
chickens, eggs, fruits, and vegetables,
are to be had for the trouble of caring
for the same, and at less cost than in
other sections. Hunger in eastern Vir-
ginia, Near-the-Sea, is something un-
heard of and unknown.

A. JEFFERS.

THE RESOURCES OF VIRGINIA.*Editor Southern Planter:*

If letters of inquiry may be taken as
a criterion, there is a great deal of in-
terest being taken in Virginia from an
agricultural standpoint by farmers in the
northern and western part of the
United States. This should certainly be
encouraging information to those who
desire to see the State develop along ag-
ricultural lines, for many of the people
who are likely to come to us from these
sections are men of energy and have at
least a fair amount of capital at their
disposal. To those familiar with the cli-
mate and soils of the State and the pos-
sibilities of crop production under good
management, it is not surprising that
there should be a great interest in Vir-
ginia lands at the present time. The
writer after having had an opportunity to
study agricultural conditions in practi-
cally every State in the South, has no
hesitation in saying that there are finer
possibilities in Virginia than anywhere
else.

While all this is true it is very diffi-
cult to give a farmer living under con-
ditions essentially different from ours an
adequate conception of the opportuni-
ties and conditions existing here. In
view of the very large number of in-
quiries received, it is important that they
should be answered in the most intelli-
gent manner possible, and I may be
pardoned for saying that no effort has been
spared to give the best and most satis-
factory information which it has been
possible to obtain to those who desire to
locate in the State. For all good citi-
zens realize that by adding to our popu-
lation we are increasing the taxable val-
ue of our property and hence the reve-
nues of the State, and this in turn will
permit the making of many needed pub-
lic improvements which will attract
other good citizens. There is plenty of
room in the State yet for we have
about ten million acres of unoccupied
land, most of which can be brought un-
der cultivation with manifest advantage
to the owners and the financial profit of
the State as well.

Strange as it may seem there are no
reports available dealing with the agri-
cultural and live stock conditions in
Virginia from a specific standpoint. A
good soil map does not exist to the best
of my knowledge and belief, and
practically no information is available
regarding our mineral resources, though,
thanks to the splendid efforts of Dr.

SPECIAL BARGAINS IN**Cockerels**

of the following Breeds. S. C. & R. C. Buff
Orpingtons, Barred Plymouth Rocks, A few
R. C. W. Leghorns left, also some extra fine
M. B. Turkeys. Our young toms will weigh
12 pounds and better, and are only 5 1-2
months old. We want room and will price to
make it. Write QUEENLAND FARM, R. D.
No. 2, Hagan, Va., T. M. King, ad. Mgr.

**Bargain Sale.**

Extra fine Cockerels of
**Brahmas, Rocks, Orp-
ingtons, Wyandottes
and Leghorns.**

Also other varieties. Prices
low. Write about it. Large
Poultry book only 6c. JOHN
E. HEATWOLE, Box L.

HARRISONBURG, VA.

COCKERELS, TURKEYS

for sale. M. B. Turkeys, Barred Plymouth
Rock and White Wyandotte chickens, S. C.
B. Leghorn hens. All satisfied customers
who purchase of Landor Poultry Yards,
Croxtan, Va. Quick sales. Order now.

MISS CLARA L. SMITH, Prop'r.
Also Beagle Pups.



20

White Wyandotte

COCKERELS for Sale.

Beauty, Size and Eggs
is what I breed for.

A. L. PARKER, Ashland, Va.

W. Plymouth Rocks

LARGE AND PURE WHITE.

BEST LAYING STRAINS.

Cockerels and Pullets or sale cheap;
also exhibition stock. BROWN LEGHORNS,
R. W. HAW, Centralla, Va.

PURE-BRED

S. C. W. LEGHORN

Cockerels from Wyckoff Strain of celebrated
layers, pure and unmixed, \$1 each. COT-
TON VALLEY FARM, Tarboro, N. C.

EGGS FOR HATCHING.

\$1 for 15. Black Minorcas, Black Lang-
shans, Barred and White Rocks, Light Brah-
mas, S. L. Wyandottes, S. C. W. Leghorns,
S. and R. C. B. Leghorns. A few more S. L.
Wyandotte cockerels for sale, \$1 each. J. B.
JOHNSON, Clover Hill Farm, Manassas, Va.

Kindly mention The Southern
Planter when writing advertisers.

FINE FOWLS.

BARRED, BUFF AND WHITE PLYMOUTH ROCKS; SILVER, WHITE, BUFF AND PARTRIDGE WYANDOTTES; BLACK MINORCAS; BLACK LANGSHANS; LIGHT BRAHMAS; PARTRIDGE COCHINS; WHITE AND BROWN LEGHORNS.
We are headquarters for stock and eggs of the above breeds, and will give satisfaction every time. **OAKLAND POULTRY FARM, C. J. WARINER, Manager, Rufin, N. C.**

Barred Plymouth Rock
AND**S. C. B. Leghorn**

chickens for sale—First Class stock of both varieties—cheap this month. 1 MAMMOTH BRONZE Gobbler, 18 Months old. Several young gobblers. Mrs. JNO. F. PAYNE, University Station, Charlotteville, Va.

GLENVIEW ORPINGTONS.

Single Comb Buffs exclusively; Cook's Strain; mated to get even surface, under color and size. Special prices for Eggs and Young Stock this Fall. **SATISFACTION GUARANTEED AT ANY PRICE.** B. S. HORN, Keezick, Va.

S. C. Brown Leghorn

Eggs, 75 cents for 15. Book your orders now for Spring Delivery. Special care given to each order. Satisfaction guaranteed. **MEHERRIN POULTRY FARM, Branchville, Va.**

The manager of the above farm is well known to me and is thoroughly reliable. **S. B. COGGIN, Agt., Southern Express Co.**

PIT GAMES.**Black Devils and Red Cubans.**

Where they won, Sharon, N. Y., 4 out of 5. Blue Rock, Pa., 2 out of 3. Clarion, Pa., 5 straight. Roanoke, Va., 8 out of 9. Akron, Ia., 2 straight. Eggs, \$2 per setting.

THOS. W. JARMAN, Yancey Mills, Va.

Plymouth Rocks.

PURE BRED; for sale, mature and young birds, prices right.

MRS. JOHN SANDERS, NORTH, VA.

Barred Plymouth Rock

Cockerels for Sale; the Kind to put at head of your yards.

J. TABB JANNEY, Van Clievesville, W. Va.

Buff Plymouth Rocks

and R. C. WHITE LEGHORNS, handsome specimens, for sale. T. M. WADE, Lexington, Va.

PURE-BRED

Barred Plymouth Rock

Cockerels at \$1 each. F. MAXWELL CONNER, Box 316, Richmond, Va.

2 YOUNG

White Turkey

gobblers and 1 old one (1892); Biltmore Price, old one, \$5; young ewes \$3. Stock: Price, old one, \$5; young ones, \$3. E. H. STORMS, Mechum River, Va.

Mention The Southern Planter when writing advertisers.

Watson, consulting geologist of the Experiment Station, systematic work of value along geological lines has now been undertaken, and promises to bear abundant fruit. Soils are also being collected from the different parts of the State and will be analyzed and reported on by our chemical department as soon as possible, and in this way data of great value will be accumulated, but results of value will only be obtained through several years of persistent labor, and in the meantime what shall be said to the people who desire to locate in Virginia?

It does not seem to the writer that it would be a difficult matter to prepare a systematic report on the agricultural resources of every county in the State. Those who wish to come amongst us want to know about our soils, their crop-producing power, their exact condition as they stand to-day, their cost and whether they are capable of rapid improvement. They also want to know something about the timber interests and the social and educational advantages afforded. They want definite and specific facts with regard to agricultural conditions as they exist in Virginia and not a lot of general articles or information which they can obtain from almost any one of the large number of agricultural newspapers published in the United States. Every man who owns property or who has property for sale is interested in having these matters clearly and concisely presented to interested purchasers, and a report containing a thorough exposition of the cost of producing various crops in the State, the amount and kind of fertilizers required, and giving in detail the special advantages which our farmers enjoy, together with a full statistical report of the conditions in every county in the State would meet the requirements of the situation and do much towards promoting desirable immigration.

Under present conditions a large percent of those who desire to locate in Virginia look to the Experiment Station as the fountain-head for information of this kind, and while legitimate information is sought after and cheerfully given, it is impossible through correspondence to intelligently answer the great variety of questions which come up for consideration as it would take a treatise on Virginia agriculture practically every day in the year to do this satisfactorily. It is manifestly impossible in an office where thousands of inquiries are annually received to devote several pages to those calling for information and then a pamphlet would answer the purpose much more effectively.

The work of the Station as most of our people realize is concentrated chiefly along lines of original research in order that new truths may be discovered and brought to the attention of the farmers of the State and the possibilities of Virginia soils for rearing and maintaining live stock and for the production of profitable crops ascertained. Information of this kind is gladly sent out every day through letters and free

OCONEECHEE OFFERINGS.

You are missing a chance to get some very fine **POLAND CHINA PIGS**. If you fail to send \$5 for one or \$10 for pair. All pigs are recordable and carry such famous blood as **LOOK-ME-OVER** and **TECUMSEH**. Pigs ready for delivery in this month 8 to 10 weeks old. Hundreds of testimonials from pleased customers bear evidence of a "Square Deal." **SINGLE COMB BUFF ORPINGTON COCKERELS** at \$1.50 up; Eggs in season at **OCONEECHEE FARM, Jeffress, Mecklenburg Co., Va.**

PURE-BRED

M. B. TURKEYS and W. WYANDOTTE Cockerels for sale; Turkeys, Trio, \$8; Single Toms, \$3.50.

W. WYANDOTTE COCKERELS \$1.00 each. These prices for orders sent in before Nov. 30th.

M. E. Bader, McGaheysville, Va.

EDGE HILL FARM POULTRY. BROWN LEGHORNS EXCLUSIVELY.

Eggs for hatching from new matings. Best laying strain \$1.00 for 15, \$6.00 per 100. No stock for sale.

CAL HUSSELMAN, Roxbury, Va., R. F. D. 1.

White Wyandottes.

1905 Cockerels 7 lbs. \$1.50 each. 1905 Pullets, 5 to 6 lbs. \$1.00 each. From pure stock hens that averaged 107 eggs each from Jan. 1st to July 1st. **GEO. M. TURNER, Louisiana, Va.**

White Wyandottes.

Extra fine lot of 6 months old White Wyandotte Cockerels, \$1.00 each. Eggs in season.—**MRS FENTON NOLAND, Hewletts, Hanover Co., Va.**

White Holland Turkeys

and **PLYMOUTH ROCK COCKERELS.**

J. A. CLARK, Malvern Hill, Va.

PURE-BRED**War Horse Game**

fowls; males, all ages for sale. **C. T. LAMB, Garland, N. C.**

Mammoth Bronze Turkeys

—AND—

White Plymouth Rock

fowls; Eggs in season. Mrs. F. H. WILKINSON, A. F. D. 1, Alexandria, Va.

QUALITY

BARRED PLYMOUTH ROCKS. See my ad in October Planter, Page 738. **L. W. WALSH, Drawer 248, Lynchburg, Va.**

Homer Pigeons,

Bred of choicest selected stock from **Plymouth Rock Squab Co., \$1 per pair.**

C. DE BRUYN KOPS, Wake, Va.

For SALE or TRADE

at the low valuation of \$300, the handsome **REGISTERED PERCHERON STALLION, Dom Pedro, 15,558, 12 years, etc., Dappled gray** yrs. old, wght., 1600 lbs. in full condition. Offered at a low price as I must sell to close partnership.

N. S. Hopkins, Gloucester, Va.

Poland China Pigs

Some fine ones, young sows bred, young boars and pigs. No better breeding in the United States. My herd boars have been sired by J. H. Sables, Lookover, Perfect 1 Know, Proud Perfection, Corrector and High Roller, the greatest prize winners of the breed—my sows have been as carefully selected.

RED POLLED CATTLE. Fine good young bulls. Will sell a few cows and heifers. **ARROWHEAD STOCK FARM.** Charlottesville, Va., SAM'L B. WOODS, Prop'r.

POLAND CHINAS

with the business hams. The best to be found at farmer's prices. Herd headed by two great Boars. The Sows are great producing matrons, being bred from great producers. Boars ready for service. Gilts open and bred. Fall pigs that are dandies. Young M. B. Toms (about 20 lbs.) at prices that will move them. A. GRAHAM & SONS, Overton, Albemarle Co., Va.

Poland Chinas.

Bargains: Pigs from Reg stock; 2 year old Reg. Boar and Bred Sows. Redfurne furnished. Order early; could not supply de-

mand last Spring; Customers in several States, write for prices and testimonials.

W. B. PAYNE, CROFTON, VA.

ORCHARD HILL

PURE BRED POLAND CHINAS.

3 fine young boars ready for service; 5 beautiful sows ready to breed; Several litters of choice pigs. Also an 8 months old Guernsey Bull whose dam tested 436½ lbs. butter in one year.

F. M. SMITH, Jr.

R. F. D., 4, Charlottesville, Va.

Tamworth Swine

all ages—\$8.00 buys a handsome fall pig at weaning. Address, K. S. HAWK, Mechanicsburg, Ohio.

Registered P. China

C. Whites. Large strain All ages mated not acting, 8 week pigs. Bred sows. Service boars. Guernsey calves. Scotch Collie pups and poultry. Write for prices and free circulars. F. F. HAMILTON, Cochranville, Chester Co. Pa.



CHESTER WHITES.

The best hog on earth; 2 extra Gilts, 10 mos. old, \$20 each.

S. M. WISECARVER, RUSTBURG, VA.

PURE-BRED

O. I. C. Pigs.

For Sale, Apply to T. M. WADE, Lexington, Va.

WANTED

20 FRESH HEIFERS. Must be good Size. CHAS. VIERS, Rockville, Md.

bulletins which are issued from time to time, and in this way the resources of the State are annually called to the attention of thousands of people at home and abroad. The Station publications, if properly supplemented with a report dealing specifically with the practical phases of agricultural work in Virginia, would certainly fill a long-felt want and would place both practical and scientific information with reference to a great variety of subjects before all who are interested in Virginia agriculture. Desirable immigration is one of the most vital needs of the State and no opportunity must be lost that will tend to interest people in our resources. The Station is gladly doing all in its power to assist in this very important and desirable work but its efforts to be effective must be supplemented by the State.

ANDREW M. SOULE.
Virginia Experiment Station.

VITALITY OF SEED

The vitality of seed depends partly on its manner of harvesting, and partly on the way it is preserved. Imported seed is rarely so full of vitality as American grown seed. The moist climate of Europe and the sea voyage injure it. Seed kept in air-tight packages, especially if stored before it is "bone dry," loses its life.

Seeds differ greatly in the time they will retain their germinative power.

Cabbage and turnips can be safely planted the third year, and will retain some vitality up to seven or eight years.

Carrots, parsley, spinach and parsnips have low vitality after two years, and fresh seeds are much to be preferred.

Cucumbers, melons, etc., will retain a vitality of seventy per cent. up to the third year.

Pepper and egg plant are of little value after the first year.

Beets are their best the first and second year, but have been known to grow a crop at eight years of age.

Lettuce is good for four years, but celery is not safe to plant after the first year.

Tomato, when well cured, is good for two or three years.

Peas and beans are good for two years, and if well cured may grow the third year.

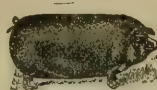
Well cured flint corn will give a fifty per cent. stand the third year. Dent corn and sugar corn are of weaker vitality, and new seed should always be planted.

"Mary," said a mother to her little daughter, "I wish you would run out and see how old Mrs. Jones is, she has been quite ill."

In a few minutes Mary came running back and reported: "She said to tell you it was none of your business."

"Why, Mary," said the astonished mother, "what did you ask her?"

"Just what you told me to," replied the little girl. "I told her you wanted to know how old she was."



Salt Pond Herd.

DUROC JERSEYS.

PAUL J. 21625, son of Oom Paul, head of herd. Sows by Red Clover, Jumbo, Longfellow and other noted hogs. A choice lot of Pigs at reasonable prices, ready to ship.

S. A. WHITTAKER, HOPESIDE, VA.

YES I HAVE A FEW FINE

Duroc Jersey Pigs

now ready to ship. \$8 each \$15 pair.

Wm. G. OWENS, The Cedars Farm, Middlethian, Va.

Duroc Jersey Pigs.

Fine Registered Stock for sale; fall delivery.

ORPINGTON and WHITE ROCK

Eggs from the best strains that money can buy: Pekin Ducks; also 10 Bee Hives for sale. W. M. CARROLL, Box 106, Lynchburg, Va.

Duroc Jerseys.

PURE-BRED

2 mos old at \$5 each.

A. H. NEWSOM, Littleton, N. C.

--- 100 ---

BREEDING EWES

FOR SALE.

Have for sale 100 medium breeding ewes. 17 ewe lambs. Ewes bred for early lambs. Write quick if you want them. EDGE HILL FARM, Roxbury, Va.

Dorsets'

Woodland Farm has a few of the best rams it has ever offered. Wool is an item worth considering this year, and our rams are exceptionally heavy shearers, besides having excellent mutton forms. J. E. WING & BROS., Mechanicsburg, O.

Flock of Sheep.

Consisting of 90 GRADE EWES, and a REG. SHROPSHIRE BUCK; ages from 2 to 4 years; half of them already served; Price, \$4 per head.

THOS. SHOOSMITH, SABOT, VA.
(20 miles from Richmond.)

W. H. H. AND FARM,

TAYLORSVILLE, VA.

H. G. HUNTER, Proprietor.

Thoroughbred ANGORAS. Only buck for sale. Correspondence solicited. Inspection invited. Satisfaction guaranteed.

EVERGREEN FARMS.

Reg. JERSEY BULLS,

Reg. BERKSHIRE BOARS,

ready for service; Sows safe in pig; S. C. B. Leghorn Fowls from choice stock. All can be gotten at reasonable prices.

W. B. GATES, Prop'r. RICE DEFOT, VA.

Mention The Southern Planter when writing advertisers.

Berkshire Pigs

of the best breeding, for sale: fine individuals, prices right. Also M. B. TURKEYS, a few B. P. ROCKS and S. C. B. LEGHORN Cockrels for sale. J. T. Olives, Alhena Level, Va.

BERKSHIRE BOAR

6 mos old, ready for service, \$10; HOMER PIGEONS, mated pairs at \$1.50; GAITED SADDLE HORSE, bay gelding, 3 yrs old, sound and perfectly gentle, style and quality. J. H. FRASER, Cartersville, Cumb. Co., Va.

TWO REGISTERED

BERKSHIRES.

SIR CHARLES 70525 and FANNY LEE 70523. Both fine, well grown animals. Also 2 registered DORSET RAMS.

PERE WILMER & SONS, Faulkner, Md.

Berkshires.

3 registered Sows farrowed 31 pigs last week Sept. last, sire Mason of Biltmore II, 68-545. Pigs are pure Biltmore blood. Price \$5 or \$11 pair at 10 to 12 weeks old. F. O. B. express here. Pair Beagle Hounds, 5 mos. old, \$18. ROBT. HIBBERT, Charlottesville, Va.

A YEARLING

Berkshire Boar

fancily bred, to exchange for one of different breeding. An extra fine BOAR PIG FOR SALE. ROSEMONT FARM, Berryville, Va.

Choice Berkshires

for sale cheap. A number of extra fine young boars large enough for service as good as any in the State. Many nice pigs. All entitled to registration.

Dalketh Stock Farm, E. W. ARMISTEAD, Prop. R. F. D. 1, South Boston, Va.

WALNUT GROVE FARM,

SHAWSVILLE VA.
Orders now taken for pure-bred

BERKSHIRE PIGS.

to be delivered after December 1st. None but the best will be shipped, others go to the pen. One two year old Hereford Bull, registered, for sale, a perfectly formed animal, and as well bred as America's best, address all communications to W. J. CRAIG, Mgr., Shawsville, Va.

GLENBURN

BERKSHIRES.



W. J. CRAIG, Mgr.

In this herd are twelve royally bred IMPORTED animals. Also selected American bred stock. Our IMPORTED boars Highgate Royal Victor and Royal Hunter won first at Eng. Royal and Va. State Fairs, respectively. A splendid lot of pigs of gilt edged breeding now ready for shipment, Dr. J. D. KIRK, Roanoke, Va.

SOME NICE

BERKSHIRES.

for sale. 1 Reg. boar, one and one-half years old, 2 Reg. Sows, 2 years old, and 2 young sows eligible to registry. Will sell the lot or singly at very reasonable prices. J. A. TURPIN, Hallaboro, Va.

CLUBBING LIST.

In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

DAILIES.

	With	Alone.	S. P.
Times-Dispatch, Richmond, Va.	\$6 00	\$6 00	
Times-Dispatch (without Sunday)	4 00	4 00	
News-Leader, Richmond, Va.	3 00	3 00	
The Post, Washington, D. C.	6 00	6 00	
The Sun, Baltimore, Md.	3 00	3 40	

TRICE A WEEK.

The World, New York	1 00	1 25
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WEEKLIES.

Times-Dispatch, Richmond, Va.	1 00	1 25
Central Presbyterian, Richmond, Va.	2 00	2 25
Religious Herald, Richmond, Va.	2 00	2 25
Southern Churchman, Richmond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	2 00	1 50
Country Gentleman	1 50	1 75
Hoard's Dairyman	1 00	1 30
Horseman	5 00	5 00

SEMI-MONTHLY.

Kimball's Dairy Farmer ...	1 00	75
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MONTHLIES.

The Century	4 00	4 25
St. Nicholas	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's	2 00	2 25
Frank Leslie's	1 00	1 25
Cosmopolitan	1 00	1 35
Everybody's	1 50	1 75
Munsey	1 00	1 35
The Strand	1 00	1 35
Madame	1 00	1 35
Argosy	1 00	1 35
Review of Reviews	3 00	3 00
Field and Stream	1 50	1 50
Woman's Home Companion ..	1 00	1 25
Reliable Poultry Journal ..	50	75
Industrious Hen	50	70
Poultry Success	1 00	75
Blooded Stock	50	65
Successful Farming	1 00	60
Southern Fruit Grower ..	50	85
Shepherd's Criterion	50	75
Commercial Poultry	50	75

When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with Southern Planter."

We cannot under any circumstances furnish sample copies of other publications.

We will cheerfully quote our best price on any list of publications submitted to us.

BERKSHIRE

I offer some exceedingly choice

BOARS

young boars for sale; by Imported Danesfield Tailor, 76490 and out of Biltmore bred sows. It will be hard to find better or cheaper stock

HENRY WARDEN, Fredericksburg, Va

THOROUGHBRED

Berkshire Boars,

Jersey Bull Calves,

Dorset Buck Lambs.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centerville, Md.

EDGEWOOD STOCK FARM.

RED POLL BULL

calves, choice breeding 9 to 10 mos. How about a calf combining Rufus and Majoliini as a herd leader? Try a Red Poll for deborning your Shorthorns and giving you all red in color.

H. B. ARBUCKLE, Maxwellton, W. Va

REGISTERED

RED POLLS.

Handsome Yearling Bull, \$60.

Fine 4 mos. old Bull Calf, \$40.

H. M. LUTTRELL,

Delaplane, Va.

3 REGISTERED

Red Poll Bulls

10, 7 and 6 mos old for sale.—W. G. LOVING, Supt. Oak Ridge Farm, Oak Ridge, Va.

\$10 EACH.

Holstein Calves

from excellent milking strains.

E. C. BELLWOOD, Manchester, Va.

REGISTERED

Holstein=Friesian

and heifers for Sale; 4 Milch Cows and 4 heifers, all have been served by our Registered Bull and are due to calve between June 15th and July 15th, 1906; 2nd calves for cows and 1st for heifers. No better Stock in the State.

Price \$30 each or \$600 for the herd of eight, F. O. C. cars here. EAST VIEW DIARY, Petersburg, Va.

DEVON H&RD. HAMSHIREDOWN FLOCK.
ESTABLISHED 1864. ESTABLISHED 1880.

DEVON CATTLE

BULLS and HEIFERS,
Hampshire Down Sheep,
RAMS and EWES.

ROBT. J. FARRER, Orange, Va.

RARE BARGAIN IN HEREFORDS

IF TAKEN AT ONCE, GOOD REASONS FOR SELLING.

BELLE DONALD 47th, calved June 22, 1904; sire Beau Donald 39th, dam Belle Donald 46th.

INEZ, calved August 10, 1903; sire Van 102983, dam Actress 7th, 115133.

LADY OF INGLEDEDE 161317, calved Mar. 2, 1903; sire Verne 120357, dam Gladys 97042.

PRINCESS DONALD, calved Aug. 20, 1904; sire Beau Donald 58966, dam Princess R. 10th.

ROSE 190238, calved Oct. 27, 1901; sire Marmaduke 90339, dam Irene 90767.

ACTRESS 7TH, calved Aug. 1, 1900; sire Actor 34 5023, dam June 00542.

PANSY 90772, calved March 20, 1899; sire Montclair 1407, dam Fearless 38361.

PRINCESS R. 9TH 142711, calved Jan. 2, 1902; sire Prince Rupert 76539, dam Lily Princess 26729.

PRINCESS R. 12TH 142714, calved Jan. 5, 1902; sire Prince Rupert 76539, dam Lily P. 2d of P. 63657.

PRINCESS R. 7TH 130479, calved March 11, 1901; sire Prince Rupert 76539, dam Florence 2d 55933.

All of breeding age have been served to Rex Premier 145572, whose show record as a sire is first at Missouri State Fair, first Hamline, Minn., and first at Kansas City, Royal.

The above are all choice individuals. Every animal guaranteed. They represent the best Herford blood, but this will not be considered in pricing them for prompt acceptance. Address

ELKTON STOCK FARM, FOREST DEPOT, VA.

Elkton Stock Farm, Forest Depot, Va.

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Hereford Bulls

Registered young stock for sale. HIGH GRADE HEREFORDS of both sexes; also, WANTED some high grade, SOUTHDOWN, EWES, WM. C. STUBBS, Valley Front Farm, Sassafras, Gloucester county, Va.

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THE WEATHER.

On July 1st, 1905, the rainfall for the year 1905, was 5.10 inches short of the average. The rainfall for July was 7.32 inches, falling on 12 different days. August 1st, the shortage had been reduced to 3.75 inches. August gave us 6.83 inches, leaving us only 2.77 inches below the regular amount of rainfall since January 1st.

The rainfall for July and August just passed, reached 14.25 inches. This large amount fell on 23 different days, and was so well distributed, as to do no material damage. There is no other portion of the State of Virginia that could absorb such a rainfall, and escape serious damage therefrom.

The liberal rainfall of July and August every year, insures a rapid growth of all crops in the ground, also all grass and weeds that may be growing in among the crops. Every foot of available space on the farm should be covered both in summer and in winter by "cover crops" first to cover and protect the ground; second to keep down the growth of grass and weeds in all places where grass and weeds are not wanted.

It is almost universally true, that the farmers are "cutting more than they can cover"—"biting off more than they can chew"—and they are not utilizing the soil thoroughly enough. Every foot of land under cultivation should be in crops, or cover crops, all the year. The land, in winter, should be covered with rye, oats, crimson clover, vetch, etc., and in summer, the cowpea and soja bean should cover every foot of land, not utilized for other crops.

Take July, August and September, with the genial temperature, and liberal rainfall—what a time for turnips, and all kindred crops. What a time for all the grasses, the meadow lands and the pastures. What a nice time, and what fine conditions for a fall crop of peas and beans, second-crop potatoes, and a fall cutting of volunteer hay.

The time is soon to come, when nearly every foot of land will be showing green with growing crops, all the year, both in summer and in winter. This is the case in Ireland and portions of England, and is the sole and direct result of the "Gulf Stream," and that same stream rolls slowly past our doors on its way to the English and Irish coasts.

This wonderful stream, stands at a temperature of 70 degrees the year 'round, and modifies, equalizes and subdues our temperature, so that we have no extreme heat in summer, and no extreme cold in winter.

In short, the thorough methods in use in France, Belgium, Italy, and England, may be successfully and profitably applied here. The "intensive" tillage of the soil, is not only practical here, but it is getting to be a necessity.

and location really demands, our land values are going out of sight. There are only about 6 million farms in the United States, when there should be 15 or 20 millions. The farm life is the only really independent life offered us.

A. JEFFERS.

Angus Cattle.

For sale at attractive prices. A FEW NICE HEIFERS, 1 YEARLING BULL, 1 EIGHT MONTHS OLD BULL and some fine BULL CALVES, all the get of our registered Bull, MARVEL (grandson of the great bull Gay Blackbird), and out of pure-bred cows.

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WILSON BROS. & CO.,
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ROSE DALE HERD...**Aberdeen Angus**

Top notch, young registered Bulls our specialty. A few heifers to offer with bull not skin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS Jefferson, Va.

MONTEBELLO HERD**Aberdeen Angus Cattle.**

FOR SALE—Registered Bull Calves from 3 months old up.

L. H. GRAY, Orange, Va.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS And HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$25. Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

**Scotch Topped****SHORTHORNS.**

Two young cows due to calve Feb. 1st and one nine months old Bull calf for sale. These are useful cattle of the low-down beefy kind and will be sold cheap if taken at once.

R. L. LEACH,
Fort Royal, Va.

The Springwood Shorthorns

offers for sale 4 HEIFER CALVES, two red and two roans, and 3 NICE BULL CALVES; also POLAND CHINA pigs, pedigree furnished with all stock sold. Prices that all farmers can afford to buy to improve their stock.

Write your wants.

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Aberdeen Angus.

Herd Bull, TERRACE LAWN, REX 33, 846, or sale; An Extra good breeder, quiet and nice to handle, the low down, blocky kind.

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J. TABB JANNEY, Van Clevessville, W. Va.

SOUTHERN POETS.

Father Ryan.

No. 9.

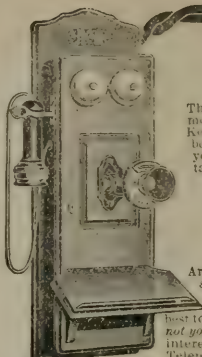
Considerable obscurity rests over the exact place and date of Ryan's birth, as is the case with many other distinguished men. Some persons say he was born at Norfolk, Va., some say at Hagers-town, Md., whilst others contend that he was born at Limerick, Ireland, but at all events, he grew up in the South, whether he was born there or not, and he warmly and fully identified himself with the place and people. The date of his birth is variously given as 1834, 1836 and 1840. When eight years old, he went with his parents to St. Louis, where he received his early training under the brothers of the Christian Schools. He showed a rare aptitude for learning and made rapid progress in his studies. He owed much to the early example and training of his mother. From his boyhood, he showed an instinctive reverence for sacred things and places, which seemed to point out the vocation of priest as a suitable one for him. This accordingly was his choice. He entered the ecclesiastical Seminary of Niagara, N. Y., and after passing through the usual course of study, was ordained priest. When the Civil War broke out, he entered the Confederate army as Chaplain and served in this capacity until its close. He was stationed at Nashville, and later at Augusta, where he founded, after the war, a Democratic paper called "The Banner of the South," which exerted great influence in that section during the 5 years of its existence. Finally, Ryan was compelled to suspend its publication, and he then removed to Mobile (1870) where he was appointed pastor of Saint Mary's church, and he continued in that position until 1883, when he obtained leave of absence from Bishop Quinlan to make an extended lecture tour to further a charitable undertaking of interest to the South. Whilst engaged in this mission he died, 1886.

Ryan was one of those poets

"Whose songs gush from their heart
Like rain from the clouds of summer;

Or tears to the eyelids start."

He never made a study of the art of poetry like Milton, Keats, Tennyson, and other great masters. Had he done so, with his good, natural abilities, he might have occupied an even higher position in poetry than he does. But he never made a special vocation of poetry, and did not subject his writings to any rigid discipline. His own great gift was to speak from the heart to the heart, and to make such melodies as air the fount of tears. In his preface to his poems, he modestly says: "These verses which some friends call by the higher title of poems (to which appellation the author objects) were written at random, off and on, here, there, anywhere, just when the mood came, with little of study, less of art and always in a hurry. Hence they are incomplete in finish, as the author is, himself, though he thinks they are true in tone. His



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The telephone in the country home is not a luxury—it's a **NECESSARY** investment that **CRIMES** returns every day. **KEENE** the farmer's family in close relation with the neighbors, **SAVES** time, a trip to town, and helps to make the young folks satisfied with the farm by giving them advantages like their city cousins.

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the head of our herd, was first in his class at World's Fair; weighs 900 pounds at 22 months. His dam is litter-mate to Lord Premier, 50001, selling recently for \$1,500; his sire was premier champion winner at World's Fair at St. Louis. With this great hog and a large line of both Imported and American well selected sows and gilts, especially chosen to mate with him, we are actually producing and accomplishing the pleasure of breeding the most magnificent strains of BIG, LONG, WIDE, DEEP THICK-SET BERKSHIRE HOGS on short legs.

We are now offering a few bred sows and gilts and some three months

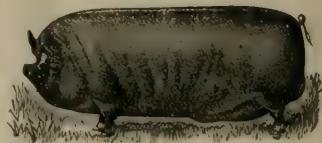
pigs. It makes no difference how fine hogs you desire to purchase, you need not go farther than

MAPLE SHADE FARM

W. H. COFFMANN, Propr., Bluefield, W. Va.

"SWELLDOM" among BERKSHIRES.

Imported KINGSTONE POETESS, Imp. LUSTRE'S BACHELOR, Imp. INFANTER (World's Fair Winner), Imp. ELMA CLERE, Imp. LOYAL MASON, Imp. SIR JOHN BULL 1st, Imp. SIR JOHN BULL 2nd, and a host of others, including the now fashionable PREMIER blood which swept the blue ribbons at the World's Fair, at St. Louis. I refer you to Mr. F. S. Springer, Secy. Am. Berk. Assn. Springfield, Ill., as to whether I own the above strains and fully 20 more. All sizes and sexes for sale cheap. TOWELS PEKIN DUCKS—"Whoppers;" PLYMOUTH ROCK, S. C. B. LEIGHORN Cockerels, PIT GAME Pullets and hens, THOS. S. WHITE, Passifera Stock & Poultry Farm, Lexington, Va.



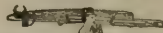
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RUNS EASY; NO BACKACHE.



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Springs can be adjusted to suit a boy 12 years old or the strongest man.

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With our Folding Sawing Machine. Saws any kind of timber. Instantly adjusted to cut log square on rough, level ground. Operator always stands straight. One man can saw more with it than two men can in any other way, and do it easier. Saw blades 8 1/2, 6, 6 1/2 or 7 ft. long. Champion, Diamond or Lance Teeth, to suit your timber. **GUARANTEE.**—If saw bar breaks within three years, we will send new part without charge. Send for Free Catalog showing latest improvements, giving testimonials from thousands. First order secures agency. **FOLDING SAWING MACHINE CO., 158-164 E. Harrison St., Chicago, Illinois.**



Pure-Bred Sheep, Hogs and Poultry.

I have yet to offer, 1 each, Yearling Ram, 3 each fine Ram Lambs and 4 each, Ewe Lambs and Bred Ewes of both Southdown and Shropshire to prompt buyers. 2 extra good 2 and 3 year old Rams, all registered and from Imported Prize Winners. I offer for quick buyers Berkshire, Poland China, and Chester White Service Boars, Bred Sows and Pigs, 2, 3, and 4 months old, singly and mated in pairs and trios. Don't forget to order some of my concentrated Swine Powder. It will pay for itself in one month. The results are simply marvelous. Five pound package \$1 or 20 pounds for \$5. It cures all swine diseases.

For prompt acceptance, I offer 50 each Barred, White and Buff Plymouth Rock, White, Golden and Silver Wrandottes, Brown and White Leghorns, S. C. Buff Orpington, Partridge Cochins, Rhode Island Red and Black Minorca Cockerels, Yearling Hens and April and May Pullets. They are all strictly first class and sure to please. I ordered at once I can supply 50 yearlings and 2 year old Barred Rocks bred from 240 egg ancestors. Some of these hens have monthly record of 22 to 24 eggs each. A great bargain if taken at once. Pekin, Rouen, Aylesbury and Indian Runner Ducks. Pair each African and Brown China Geese, \$7.50 per pair if unsold. Bronze and White Holland Turkeys. You should place your order immediately, since prices will advance right along. Write today, and give me a trial.

JAMES M. HOBBS, 1521, Mount Royal Avenue, Baltimore, Md.

feet know more of the humble steps that lead up to the Altar and its mys-Parnassus and the home of the Muses, teries than of the steps that lead to and souls were always more to him than songs—but still, somehow, and he could not tell why, he sometimes tried to sing, and here are his simple songs. He never dreamed of taking even the lowest place in the rank of authors."

That Father Ryan's poetry widely touched the heart and secured him a large audience, may be judged by the fact that the volume has already run through twenty editions. Religious feeling is predominant in his writings, and next to that, patriotism. These two are the twin founts of his song. There is one peculiarity in his poetry, to which I can not recall any precedent or parallel in the writings of other poets. It is, I believe, without a line devoted to love; I mean the love between lovers, or between husbands and wife. Religion and patriotism, as I have said, above, were the two great themes that inspired him. His songs are all in the minor key, that key in which simple nations compose even their dance music, and which is the quickest to touch the feelinks. The reader seems moving in Cathedral glooms, by dimly lighted altars, with sad processions of mourners, and the music of lamenting choirs. "The Lost Cause" to which he was passionately attached, gave him full scope to exercise the minor key, and to my thinking "The Conquered Banner" was the most beautiful, powerful and pathetic poem called forth by the war. What added immensely to the effect of this poem was its being wedded to music so singularly appropriate, music so searching and pathetic that it seemed to interpret perfectly the sentiment of the song and to intensify it. I do not know who composed this music, but it was certainly a person of talent, skill and fine feeling. I believe that Father Ryan will be handed down to posterity as the author of "The Conquered Banner," for in that poem, he reached the high-water mark of his emotions,

FOREST HOME FARM OFFERS BERKSHIRES

Of choicest breeding and individuality. Write for what you want.

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BERKSHIRES. Boars ready for service, Sows to farrow in November and December, Pigs in pairs and trios not akin.
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Cleats a two acre circle with one sitting—pulls anything the wire rope will reach; stumps, trees, grubs, rocks, hedges, etc. A man and a boy with one or two horses can run the

COMBINATION STUMP PULLER,

Stump Anchored or Self Anchoring.

A minute and a half it takes for the ordinary stump. No heavy chains or rods. Note the strong wire rope with patent coupler—grabs the rope at any point. Does not chafe rope; far ahead of old style "take-ups." Smallest rope we furnish stumps 40,000 lbs. strain. It generates immense power and it's made to stand the strain. We also make the Iron Grab and Stump machine, the L. N. L. Grabber and Hawkeye Grab and Stump Machine. Write for free illustrated catalogue.

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and of his poetic talent. He has written a good many other poems in the same vein, as for instance, his "Sentinel Songs" "The Sword of Robert E. Lee;" "A Prayer for the South;" "The Land We Love;" "Our Day;" and others, all breathing the same spirit. But although he so tenderly cherished the memory of "The Lost Cause," he could be just and generous to the North, as he showed by a poem he wrote in 1878, entitled "Re-united," when his feelings had been softened and his gratitude excited by the kind and sympathizing spirit shown by the North during the epidemic of yellow fever that broke out in Memphis that year.

The following poems are generally considered among his best.

"The Song of the Mystic"

"De Profundis."

"The March of the Deathless Dead."

"Rest." "The Rosary of my Tears."

"A Hymn to the Sacred Heart."

"A Nocturne."

"Their Story Runneth Thus."

"Tears."

"Prince Imperial"

"In Memory of my Brother."

His writings exert a noble influence in behalf of the soul life, generally so neglected under the strain and pressure of transient things. In his poems, he shows himself truly the priest, the teacher and the inspirer of love for truth and duty. On the whole, his poems show us rather what he was capable of than exhibit any special excellence. He has not the consummate art that meets all the demands of criticism, but he has that touch of nature and true feeling that appeals to every heart.

But Father Ryan was not the only "poet-priest" produced by the South. John B. Tabb of Va., a Roman Catholic priest and a poet, may also claim that title. I am sorry that my knowledge of the latter is too meagre for me to offer my readers even a short biographical sketch of him. He has written a great many short poems, from which I select one on Lanier.

TO SIDNEY LANIER.

"The dew drop holds the heavens above

Wherein a lark unseen
Outpours a rhapsody of love
That fills the space between."

"My heart a dew drop is, and thou
Dawn spirit! far away

Fillest the void between us now,
With an immortal lay."

Father Tabb has already written some very eloquent verses in praise of Keats. A recent magazine contained one of his poems, so he is still wielding his pen.

To Clean Furniture.

One tablespoonful sweet oil, 2 tablespoonful turpentine, 1 tablespoonful of vinegar; put it all in a cup and set the cup in a pan of water. Let it get hot and apply with a woolen cloth; rub until dry with another soft cloth.

MONTVIEW STOCK FARM,

(CARTER GLASS, Owner.)

"Manor Faithful."

Geo. F. Weston, manager of Biltmore Farms, wrote of this famous Berkshire Boar in the PLANTER of March, 1903: "The Sensation of our Sale was the boar, Manor Faithful, sold for \$625. THERE WAS NOT ANOTHER BOAR FOUND IN ENGLAND COMBINING SO MUCH QUALITY AND SIZE WITHOUT SERIOUS DEFECT." Six times winner of first honors in England.

"Her Majesty."

THE COUNTRY GENTLEMAN, January, 1903, singled out this noted sow, the first prize winner at the Royal English Show, as "INDIVIDUALLY THE BEST SOW BILTMORE FARMS HAVE EVER FOUND OR IMPORTED." Her majesty represents a long line of first prize and sweepstakes Winners in England. Her majesty, Sultana Glen III, and other splendid brood-sows of our herd have been bred to Manor Faithful or his phenomenal son, Montview Faithful. Have your orders booked for pigs right away and get stock that makes meat and wins prizes.

MONTVIEW STOCK FARM, P. O. Box 513, Lynchburg, Va.

OAK HILL FARM

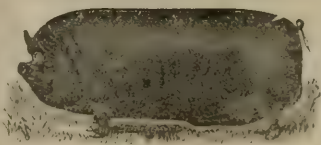
SADDLE AND THOROUGHBRED HORSES,
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We POSITIVELY GUARANTEE to breed any ship the very best strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

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LARGE YORKSHIRES.

The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times.

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

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The Property of WESTMOELAND DAVIS, Esq.

Large White Yorkshires.

LARGE WHITE YORKSHIRE PIGS from prize winning families for sale. Herd headed by imported boar, "Holywell Huddersfield" No. 4 50 (A. Y. C.), second prize at Yorkshire Show, England 1904. These pigs are the English Bacon breed: they are prolific breeders, economical feeders, and hardy of constitution. During the month of August the two farrowing sows, imported Sweetest Polly (A. Y. C.), gave birth to 17 pigs, and the sow imported Holywell Empress (A. Y. C.), gave birth to 14 pigs. Orders will now be received for boars and sows from these and similar litters. Also a few boars fit to head any herd at reasonable prize.

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REGISTERED GUERNSEYS—Herd headed by imported Top Notch, 9023 (A. G. C. C.), a son of Imported Itchen Beda advanced Reg. No. 136, assisted by Mainstays Glenwood Boy, 7607, A. G. C. C. (son of Jewell of Haddon), advanced Reg. No. 92. This herd is rich in the blood of Mainstay, Rutila's Daughter, Imported Honoria (Guernsey Champion, first prize at St. Louis), the Glenwood, Imported May Rose and Imported Masher families. Bulls only for sale. No cows for sale.

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Flocks and herds may be viewed by appointment.

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MAGAZINES.

The November Century begins the seventy-first volume of the magazine with the first chapters of a new novel by Mrs. Humphrey Ward, entitled "Fenwick's Career"—and a new novel by Mrs. Ward, that strong and accomplished writer, is always an event in the book and magazine world. John Fenwick is a young painter, who, leaving wife and baby behind in the Westmoreland country, goes up to London to make his fortune. Albert Sterner is the illustrator; and the frontispiece of the number, in tint, shows the artist and his pretty wife—the two characters of chief interest in the opening chapters.

Jack London, too, has a story in the issue—a picturesque tale of mining life, "All Gold Canon." There are other short stories from Olivia Howard Dunbar, Carroll Watson Rankin, Eleanor H. Porter and Arthur Ruhl.

William Barclay Parsons, member of the Isthmian Canal Commission of 1904-1905 and member of the Board of Consulting Engineers, gives readers the November Century a wealth of authoritative information about the construction of this wonderful waterway, whose accomplishment will mean much to all the nations, but most to America. For lovers of Whitman there are several pages of memories of Walt Whitman's last days in Camden—extracts from letters and from Horace Traubel's record of the poet's conversations in his later years.

The recent discovery and exploration of the tomb of the parents of Tit, in the Valley of the Kings, make a narrative of fascinating interest. It is told, illustrated with many reproductions from photographs, by Henry Copey Greene. The second installment of papers on "Historic Palaces of Paris," by Camille Gronkowski, describes the Hotel du Prince Eugene (the German Embassy), a finished example of the Empire style; and there are new chapters and pictures recounting Catharine A. Carl's experiences "With the Empress Dowager," of special timeliness when the President's daughter has just been the guest of the Emperor. "Timely, too, is spirit of School and College Sport," comparing English and American football.

The beginning of three new serials, four absorbing short stories, another

WOODSIDE BERKSHIRES.

EVERY THING SHIPPED ON APPROVAL,

We are now offering some very choice pigs sired by my two great boars, LUSTRE'S CARLSLE OF BILTMORE, No. 73057, and MASTER LEE OF BILTMORE No. 70379, and out of sows weighing from 500 to 600 lbs. each, in only fair breeding condition. For the next 30 days I will sell strictly choice pigs at greatly reduced prices, in order to make room for Fall Litters. To show our confidence in what we offer and insure satisfaction to our customers, we will ship pigs ON APPROVAL, and if not entirely satisfactory in every respect, you can return them at MY EXPENSE. In other words you can see the pigs before you buy. Address,

WOODSIDE STOCK FARM,

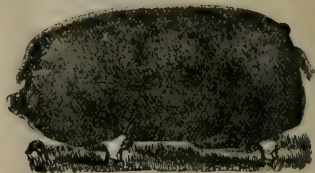
R. S. FARISH, Prop., Charlottesville, Va.

POLAND-CHINAS.

I have a limited number of Pigs by my fine Boars, Gray's Big Chief, 57077

and Victor G. 57075, and can furnish pairs not akin or related to those previously purchased. Young Boars and Sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address

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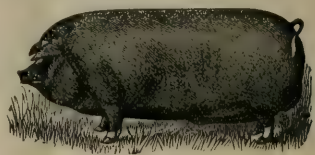


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REGISTERED POLAND CHINAS.

I can now furnish some choice pigs out of some of my best brood sows and bred from some of the most noted and popular western strains. For style and finish they are UP-TO-DATE.

Prices reasonable.

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TAMWORTH PIGS

entitled to registration; also bred Sows at reasonable prices.

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It pays to breed the best. Ours are bred for Size, prolificacy and fine individuality; large, loose, mellow and easy fleshers; 3 litters of choice 4 mos. old Boars; 3 choice bred sows in pig, Second litter. SPECIAL CUT PRICES on above; we need their room. Also choice WHITE P. ROCK COCKS and COCKERELS; M. B. TURKEYS, young and old toms; latter weigh 40 lbs., choice and pure. Remember it is not our price, but quality that's high. T. M. BYRD, R. F. D. 3, Salisbury, N. C.

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TUBULAR
CREAM SEPARATORS

bowls without complicated inside parts—hold the world's record for clean skimming, durability, capacity, easy turning and easy washing—save half the work—greatly increase the amount and quality of butter—no waste like all other separators. Write for catalog R-230

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THE SHARPLES SEPARATOR CO.,
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We want you to know Tubular
Cream Separators as they are

Investigate the low can and enclosed gears. Tubular have neither oil cups, tubes, nor holes—they oil themselves. They have

LIVE STOCK DEALERS.

Farmers Wishing to Buy or Sell Live Stock!

I am receiving each week consignments of Good Stock, Cattle, Steers and Heifers and can furnish you almost any grade of Stock or feeding cattle you may want.

Am still getting consignments of BREEDING EWES and FEEDING LAMBS and WETHERS and can fill your orders for such as you want on short notice. If you have any kind of Live Stock I sell, ship it to me.

I give my personal attention to the sale of every animal.

Returns made promptly after sale. Write me if you wish to buy or if you have anything to sell in my line. I MAKE A SPECIALTY of ACCUR-

ATE INFORMATION. This is worth a great deal to a shipper of Live stock. Address

ROBERT C. BRAUER, Richmond, Va.

COMMISSION SALESMAN OF CATTLE, HOGS, SHEEP, LAMBS, AND CALVES.

Address: P. O. BOX 204. Pens and Offices: Union Stock Yards. Residence Phone 5059; Office Phone 993

of Pinkey Perkin's adventures, and illustrated sketch, by J. L. Harbour, of "The Children's Hour in the Old South Meeting-house," an argument for "Military Training in Our Schools and Colleges" by Captain Charles T. Boyd, U. S. A., many pictures, plenty of jolly verse, and the usual St. Nicholas departments—the November issue of St. Nicholas starts the new volume off most promisingly.

A new serial story by Ralph Henry Barbour is a cause for congratulation; and the first chapters of "The Crimson Sweater" are equally good reading for both girls and boys. The beginning of Agnes McClelland Daulton's "From Sioux to Susan" introduces a delightful family of grown-ups and youngsters, with "the minister's Sue" leading the fun. But it is Helen Nicolay's "The Boy's Life of Lincoln," whose first chapters are the notable features of the November St. Nicholas, and whose serial publication will, in itself, make memorable the volume of 1906. Twenty years ago, it will be remembered, The Century Magazine printed its great life of Abraham Lincoln, written by Lincoln's private secretary, John G. Nicolay, afterward Marshal of the United States Supreme Court, and John Hay, who became our beloved Secretary of State. To these two men Lincoln left the material for his authorized biography; and the daughter of John G. Nicolay has now made up from the large book and from other material a story of Lincoln's life for young readers, aiming to show him as a living, breathing American.

Caroline Duer's new novel, "Cinderella of the Garden House," appears complete in Lippincott's Magazine for November. Young men and women as well as those of more mature tastes find an appealing quality in fiction from the pen of this writer. Her people talk and move like really live human beings and her scenes take a grip on the memory that refuses to let go. The "Cinderella" of Miss Duer's creating is a young American girl who is making a tour of Europe in the train of an uncongenial stepmother.

SUNNY HOME HERD

Aberdeen Angus Cattle.

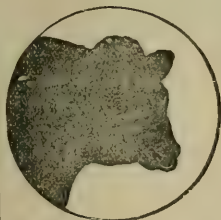
Those bull calves I have for sale are STRICTLY CHOICE. The low, blocky sort, true Angus.

Remember they are sired by one of the last and best sires of the great Gay Blackbird (the greatest sire of herd bulls ever in America.) They will please you.

Write A. L. FRENCH,

R. F. D. Byrdville, Va.

P. S. Am sold out of heifers but will spare a few good young cows to go with bulls.



The Delaware Herd of

ROYAL ANGUS CATTLE

is not surpassed either in breeding or individual animals by any herd in the East. At the head of our herd is

PRINCE BARBARA, 68604,

the son of the great \$9,100 Prince Ito. Females of equally choice breeding. Write your wants, remember, we take personal care of our cattle; keep no high priced help; incur no expense of exhibiting; all of which enables us to offer stock at equitable prices. Send for pamphlet.

MYER & SON, Prop.,

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The Grove Stock Farm

... HAS FOR SALE ...

Holstein-Friesian Calves

of fine breeding and individuality

at remarkably reasonable prices.

Do you want something choice?

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T. O. SANDY, Burkeville, Va.

HIGH CLASS POLAND CHINAS.

All Eligible to registry and from the celebrated SUNSHINE and PERFECTION strains. Boars ready for service. Glits ready to breed and 3 months pigs, of both sexes now offered at very low prices. Write for prices on what is wanted. **E. T. ROBINSON, Lexington, Va.**

At Rome the prototype "fairy" god-mother appears and soon the Prince draws near—and thereby hangs the tale.

The November Lippincott's pays respect in large measure to the two supreme subjects of the month: Football and Elections. Ralph Henry Barbour's Harvard-Yale football story is called "The Dub." Through his clear portrayal, the field and score-board appear before the retina as clearly as the printed page. Girls say it is a splendid story; so Barbour scores as well as his college. The best election story of the month is that called "Spatter's Campaign," by Sarah Comstock.

A good example of "the noble art of self-defence" is given under the title of "The Broken Foil," by Fred Gilbert Blakeslee. The title of Eleanor H. Porter's story is one to keep you guessing. She calls it "Nuts to Crack and Mary Ellen." Life in a village runs along without a ripple until some little-suspected human tragedy is uncovered which shakes the very foundations. Such an incident is that told by Lizette Woodworth Reese under the title of "Henrietta." The racing season makes Alfred Stoddart's entertaining steeple-chase sketch, entitled "Over the Jumps," especially timely reading.

Maud Howe is the author of a delightful fiction-travel paper called "Bad Langenschwalbach." Actors—and others—will be interested in a sketch, by Isabel Gordon Curtis, called "An Inherited Autograph." In it the autograph of the late Joseph Jefferson is reproduced as well as that of the first Joseph Jefferson, which it strikingly resembles.

INFRINGEMENT SUIT.

The Glen Mfg. Co., of Ellwood City, Pa., manufacturers of The Glen Steel Folding Mat has brought suit for infringement on their patents against Geo. C. Sleeth, of New Jersey, who makes a steel mat known as The Rossman Mat sold by the Rossman Manufacturing Co. The Glen people state that they are going to vigorously prosecute their suit and desire to run in following infringing articles.

TWO PURE-BRED

Shorthorn Bull

Calves for sale; from the Celebrated Spanner herd of pure MILKING SHORTHORNS of Spring Creek, Pa. Pedigrees furnished.

ANTRIM STOCK FARM, Warrenton, Va.

ELLERSLIE FARM—:::

Thoroughbred Horses

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Shorthorn Cattle,

Pure Southdown Sheep and Berkshire Pigs.

For Sale, R. J. HANCOCK & SON,
Charlotteville, Va.



ACTOR 26th, 136288

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Owned by S. W. Anderson, Blaker Mills, Green-brier county, W. Va.

A choice lot of BULLS, COWS, and HEIFERS for sale. Also a few POLAND HEREFORD BULLS recorded in the National Polled Hereford Records. Write for catalogue and prices Farm near Alderson, W. Va., on the C. & O. R. R.

Telegraph and Telephone office, Alderson W. Va.

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Hereford Cattle.

Entire herd for sale, 26 head. Will price to move them.

Muscovy Ducks===Toulouse Geese.

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Glencoe, Baltimore county, Md.



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Registered Hereford Cattle and Berkshire Hogs.

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Hereford Herd headed by Prince Rupert, No. 79539, whose son, Prince Rupert, 8th, won first prize in the 2 year old class at the recent Chicago International show. Berkshire Herd headed by Baron Premier, No. 5527, whose son, Admiral Schley, was first in the 6 to 12 months class at the International Show, 1902. Young stock both calves and pigs for sale at reasonable prices.

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Send for our History of Hereford Cattle, It's Free.

If you have as many as 10 cows, you need a Hereford bull. We have the best to be had, both in breeding and individual merit at right prices. We have the best equipped plant in the South and East for the production of high class stock. The ACROBAT stands at head of herd. We breed Berkshire hogs and Hackney Horses.

Write us a letter now—you are loosing money by putting it off.

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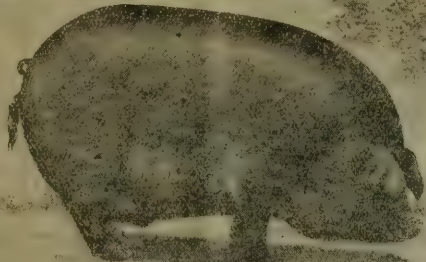
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50 styles and sizes. Sweep, Geared, Combined and Power.

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We will pay you \$500 in cash if this engraving is not a correct reproduction of the photograph of this hog as sent us by Mr. Wright, said photograph being on file in our office for inspection.

LARGEST HOG IN THE WEST

UNION, OREGON.

INTERNATIONAL STOCK FOOD Co., Minneapolis, Minn.

GENTLEMEN:—I enclose photograph of a hog that is owned by one of my customers. This hog has been fed "International Stock Food" and now weighs over 1100 pounds and is still growing. This is a big living advertisement for "International Stock Food" in this part of the country. Yours truly, L. A. WRIGHT.

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\$1000. IN CASH PREMIUMS

FOR MEN, WOMEN, GIRLS AND BOYS
WHO USE

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For Horses, Cattle, Sheep, Goats, Colts, Calves, Lambs, or Pigs. You have as good a chance as anyone in earning one or more of these spot cash premiums and you may receive several hundred dollars without one cent of extra cost to you. These 24 Cash Premiums are absolutely free for our friends and customers who are feeding "International Stock Food".

If you have not received our complete list of these 24 premiums we will mail you one if you write to our office and request it. The smallest premium is \$25.00 cash and the largest is \$125.00 cash.

Dan Patch 1:55 ⁵/₁₆ COLORED Lithograph ABSOLUTELY Free

This Splendid Picture is a Reproduction of a Photograph which was taken by our own artist. It is printed in Six Brilliant Colors. It is as life like as if you saw Dan coming down the track and showman pacing a 1:55 clip with every foot off of the ground. Every Farmer and Stockman should have a picture of the Fastest Hardest horse that has ever appeared on earth. Dan is in better shape than ever this year. In his first public appearance in 1905 he paced a mile in 1:55 5/16 at the Minnesota State Fair and he followed this up in four days with a mile in 1:57 1/4, with the last quarter in 27 1/2 seconds, which is a 1:50 gate. On Saturday, October 7, at Lexington, Ky., Dan Patch again started the world by lowering his own World's record from 1:56 to 1:54 1/4. Dan has been eating "International Stock Food" every day for three years and it has given him better digestion and assimilation and more strength, endurance and speed. He was not a champion when we bought him but has broken nine world records since that time.

12-2 DAN PATCH 1:55 5/16 IS OWNED BY INTERNATIONAL STOCK FOOD CO.
THIS BEAUTIFUL PICTURE MAILED FREE POSTAGE PREPAID IF YOU WRITE US

1st.—HOW MUCH STOCK OF ALL KINDS DO YOU OWN?

2nd.—NAME PAPER IN WHICH YOU SAW THIS OFFER.

INTERNATIONAL STOCK FOOD CO., MINN., U. S. A.

BARNEY HAD BEEN OBSERVANT.

They called him "Barney the Blunderer" because he had made so many mistakes. He had been working for a coaldealer about six months, and was an earnest, honest soul, but he did not seem to learn anything concerning the details of the business.

One morning, after having delivered coal to two wrong addresses, he was rather short and crusty in answering a regular customer, so the proprietor discharged him, saying: "Go to the office and get your money. I've been as patient with you as I could be, but you are too thickheaded to ever learn anything."

"All right, sir," answered Barney. "Mebbe O'might tick-headed, os yez say, but O've learned w'ing, an'away."

"If you have really learned one thing, and learned it well, I'll not discharge you," said the proprietor banteringly. "Now, tell me what you have learned."

"O've learned, sor, that sixteen hundred makes a ton in this place," replied Barney, and he went back to work.—Lippincott's.

Kind words will often loosen up a rusty, crusty neighbor's friendship. But if a screw sticks it needs the application of a red hot iron to its head to make it obliging—it won't open its heart till it's warm.



The first fruits of the flock are here in October this year. We never took more pains in mating and we must have better ram lambs than ever before. As long as we deserve your trade, we shall expect it. The Dorset is coming right into its own in Virginia. If you are in the lamb business you must have Dorset blood. We will book your orders right now for Spring delivery. With best wishes for the breeders of the golden hoof,

H. B. ARBUCKLE,

Greenbrier, Co., Maxwelton, W. Va.

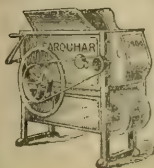
Edgewood Stock Farm. DORSET SHEEP.

HOLSTEN FRESAN

A choice lot of young stock for sale; some young bulls ready for service and bull calves sired by DEKOL 2D, BUTTER BOY, 3D, No. 2, and SIR PAULINE CRADDOCK, whose breeding and individuality are unsurpassed.

Also a nice lot of BERKSHIRE PIGS, Biltmore and Filston strains.

Before buying, write us what you want. FASSETT BROS., Sylmar, Md.



Farquhar Pea Huller

is a machine that will do the business. It is made solid, staunch and strong, and is one of the few devices for the farmer that will pay for itself.

This is a machine that every farmer who raises peas and beans for market needs.

Send for circulars with full particulars. Special discount to introduce the first machine in each locality. Thousand of testimonials from satisfied purchasers.

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David E. Foutz Co., of Baltimore, Md., send us a little handbook on Proteinology giving information as to the value of protein as a feed for Stock, and as to their special protein feeds. Same will be sent to any one on application. See their advertisement in this issue.

Geo. W. Osterhout, of Bedford City, Va., sends us particulars of his prize strain of S. C. Brown Leghorns. Those interested in this breed should send for same.

A. H. Patch sends catalogue of his well known Black Hawk Corn Sheller and Grist Mill. See advertisement.

The International Live Stock Exposition sends us particulars of the preliminary classification of the Stock to be exhibited at the Union Stock Yard Amphitheater, Chicago, December 2 to 9, 1905.

Geo. M. Clark, Higganum, Conn., sends catalogue of his various forms of Cutaway Harrows with testimonials as to their fitness to do the work for which they are designed. This Harrow in its various forms is a most useful implement for fitting land for crops of all kinds.

The Nut Nursery Co., Monticello, Fla., send catalogue of budded and grafted nut trees.

The Railroad Companies of the country send us the arguments in behalf of the companies against rate fixing by Congress.

The W. Smith Grubber Co., La Crosse, Wis., send us catalogue of stump pullers and testimonials in their favor.

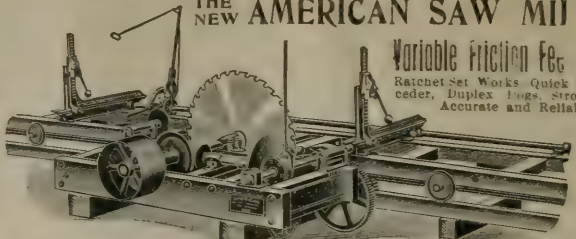
The National Committee of the American Reciprocal Tariff League, send us Report of the Proceedings of the National Reciprocity Conference, held in Chicago, August 16 and 17, 1905. Every farmer should give his support to this movement for widening the market for cattle, sheep, and agricultural products.

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Our Old Friend and patron, Mr. Thos. S. White, has become so famous as a veteran Berkshire breeder that he is now receiving export orders for his Royally bred pigs. For many years, he has been a direct importer of finely bred hogs, and as he is actually receiving orders from foreign countries, he is now a full-fledged exporter also. We congratulate Mr. White on his success which he deserves.

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Seven Other Sizes Made. Also Edgers, Trimmers, Shingle Machines, Lath Mill, Rip and Cut-off Saws, Drag Saws, Cord Wood Saws and Feed Mills. Catalogue Sent Free.

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Spray Thoroughly with Lime-Sulphur at once.

Many fruit growers know the San Jose scale from sad experience. These and others whose plants are affected with this pest, should prepare at once to spray them with the Lime-Sulphur preparation. This is the best time to treat the San Jose scale, for we have much more open weather in the fall than in the spring, and other work is not so pressing. If this work is postponed until spring, it may not be done at all. Besides it has been proven that thorough spraying in the early fall with the Lime-Sulphur wash is quite effective against this pest.

The formula recommended for use in this state is as follows:

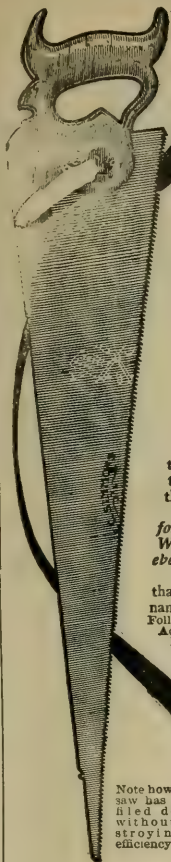
Lime (unslacked).....	30 pounds.
Sulphur (flour or flowers).....	30 "
Salt	10 "
Water	100 gallons.

For work in small orchards use a spray pump mounted on a fifty gallon barrel and one half of the quantity of materials. This quantity can be made in an ordinary iron kettle, and need be boiled only forty minutes, if boiled vigorously.

This wash is much cheaper than kerosene and some patent washes on the market, and is not difficult to prepare. Reports No. 141 and No. 152 from this office in conjunction with the Virginia Experiment Station, give further particulars in regard to this matter. If you have not these publications at hand they will be mailed you upon application to Prof. A. M. Soule or the undersigned.

J. L. PHILLIPS,
State Entomologist.

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And every other tool in the Keen Kutter line is as good a tool of its kind as Keen Kutter Hand Saws. The long life of tools bearing the

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trade mark is not chance or accident. It is due to the fact that nothing is spared to make Keen Kutter Tools the best that brains, money and skill can produce.

The Keen Kutter Line has been *Standard of America* for 36 years and was awarded the Grand Prize at the World's Fair, St. Louis, being the only complete line of tools ever to receive a reward at a great exposition.

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REPORTS.

U. S. Department of Agriculture, Washington, D. C. Bureau of Entomology. Circular 66. The Joint Worm.

Office of Experiment Stations. Bulletin 160. School Gardens.

Forest Service. Bulletin 67. Forest reserves in Idaho.

Bureau of Plant Industry. Bulletin 56. Nomenclature of the Apple.

Bureau of Statistics. Bulletin 37. Trade with Noncontiguous Possessions in Farm and Forest Products, 1902-1904.

Bureau of Soils. Bulletin 29. Tobacco Investigations in Ohio.

Bureau of Statistics. Bulletin 34. The Commercial Cotton Crop of 1903-4.

Farmers' Bulletin No. 230. Game Laws for 1905.

Alabama Experiment Station, Auburn, Ala. Bulletin 132. Diseases of the Apple, Cherry, Peach, Pear, and Plum, with Methods of Treatment.

California Experiment Station, Berkeley, Cal. Bulletin 170. Studies in Grasshopper Control.

Bulletin ... Commercial Fertilizers

Cornell Experiment Station, Ithaca, N. Y. Bulletin 229. An Apple Orchard Survey.

Hatch Experiment Station, Amherst, Mass. Bulletin 105. Tomatoes Under Glass. Methods of Pruning Tomatoes.

Louisiana Experiment Station, Baton Rouge, La. Bulletin 3. Geological Survey of Louisiana.

Michigan Experiment Station, Agricultural Coll., Mich. Bulletin 228. Discussion of the Milk Problem from the standpoint of Production.

Ohio Experiment Station, Wooster, O. Bulletin 162. Plums for Home and Market.

Bulletin 165. Experiments with Winter Wheat.

Purdue Experiment Station, Lafayette, Ind. Bulletin 1108. Soy Beans. Middlings and Tankage as Supplemental Feeds in Pork Production.

Bulletin 107. Agriculture at Purdue University.

Rhode Island Experiment Station, Kingston, R. I. Bulletin 106. Concerning the Agricultural Value of Sodium Salts.

Bulletin 108. Analyses of Commercial Fertilizers.

Virginia Weather Service, Richmond, Va. Report for September, 1905.

Wisconsin Experiment Station, Madison, Wis. Bulletin 127. The Principles and Practice of Horse Breeding.

Bulletin 128. A Swiss Cheese trouble Caused by Gas Forming Yeast.

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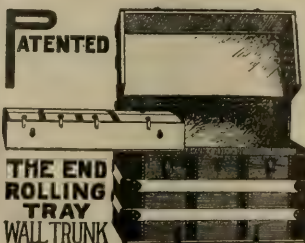
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Three Per Cent. Interest Allowed in Savings Department.



New Idea in Trunks.

SOLD DIRECT from our factory to your HOME at wholesale price. Most convenient for home use, extra strong for travelling. No heavy top to lift, or heavy tray to lift out; Tray runs on rollers and is moved easily. Sets flat against wall leaving no space behind it for the accumulation of various articles. No pulling away from the wall to open it.

USEFULNESS, SIMPLICITY, DURABILITY, and ECONOMY combined. Prices from \$4 up. Sold under GUARANTEE. Money refunded if not perfectly satisfactory. Send for FREE illustrated catalogue. Return mail will bring it. H. D. THACKER & CO., Petersburg, Va. Sole manufacturers.

SOUTHERN PRODUCTS AT NORTHERN FAIRS.

What New Yorkers Think of the South's Apples.

People can better be convinced of conditions, if they are brought into touch with the material results growing out of them. The Land and Industrial Department of the Southern Railway, realizing this, has been exhibiting for several weeks at Fairs in the Northern and Western States a collection of products from the territory traversed by its lines. These exhibits have attracted marked attention, and have been the means of informing thousands of people of the opportunities offered by the South to the farmer, stock-raiser, manufacturer, &c. Printed matter descriptive of lands and business openings of all kinds along the Southern Railway has been distributed from these exhibits among people earnestly seeking information concerning the resources of the South and the advantages offered. Among the various products displayed were some fine specimens of apples, the superiority of which is shown by the following:

New York State Fair,
Syracuse, N. Y.

In recognition of the fact that the apples exhibited by Mr. J. E. Hall, of Wayneville, N. C., and The Stuart Orchard Company, Stuart, Va., in the Southern Railway exhibit arrived too late to enter for award, we wish to express the opinion that these apples are the finest specimens exhibited at the New York State Fair, and had they been properly entered, would have received highest award.

ALBERT WOOD,
H. S. WILEY,
Judges.

September 14th, 1905.

To appreciate the force of the above, it should be borne in mind that the region surrounding Syracuse is one of the oldest and most important apple producing sections in the United States.

A TRIP UP "THE NYP AND N."

We had occasion recently to take a trip up the Eastern Shore of Virginia and Maryland. As many of our readers know, this is one of the grandest trucking sections in the world, being especially adapted to sweet and Irish potatoes. The quantity of truck grown in this section and shipped to Northern markets would certainly astonish those not familiar with the situation. Notwithstanding the enormous advantages of the climate and soil and Railway facilities of this section it is not by any means over crowded. There is plenty of good land to be had at reasonable prices, made. Any parties interested should communicate with Mr. R. B. Cooke, Traffic Manager, Norfolk, Va., for information regarding this section.

Mention The Southern Planter when writing advertisers.



Fruit Trees 7½c

Why pay two prices for all kinds of nursery stock to cover agents' profits and bad debts, when we, by employing no agents and making no bad debts—selling for cash direct to the people at lowest wholesale rates—will save you half. Twenty-one years experience. 1,000,000 high class fruit trees, 50,000,000 strawberry plants. Special bargains in peach trees. Safe and cheap delivery anywhere in U. S. Catalogue free. Valuable book on fruit growing free to buyers.

Strawberry Plants

\$1.25 per 1000

Write to-day for catalogue. Mention this paper. Address
Dept. E, CONTINENTAL PLANT CO., Kittrell, N. C.

Headquarters for Nursery Stock.

WHOLESALE
AND
RETAIL.

We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

Apples,	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

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... AGENTS WANTED. ...

FRANKLIN DAVIS NURSERY CO., Baltimore, Md.

..ELMWOOD NURSERIES..

—WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF—

APPLES, PEACHES, PEARS, CHERRIES, PLUMS, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

MISSOURI STATE HORTICULTURAL SOCIETY.

Forty-eight Annual Meeting will be held at Kansas City, Mo., December 29, and 30, 1905.

We shall make this the best meeting of the many good meetings the Society has held during the last twenty-five years. There will be in attendance many prominent horticulturists and professional men; one at least will address us at each session. For each evening session an illustrated lecture will be given on special topics.

The meeting is held on the dates given because we are sure of securing one fare for the round trip from the railroads during the holidays. The Coates House will give a rate of \$1.00 and up on the European, and \$2.50 and up per day on the American plan.

The sessions will be held in the hall of the hotel. Premiums of \$100 will be given on apples.

J. C. WHITTEN, President,
Experimental Station,
Columbia, Mo.

L. A. GOODMAN, Secretary,
4000 Warwick Blvd.,
Kansas City, Mo.

THE REMEDY THAT INSPIRES FAITH AND BRINGS RESULTS.

The following is a copy of a letter recently received by Dr. Jos. Haas, of Indianapolis, Ind., the manufacturer of the famous Hog and Poultry Remedy that has been manufactured and has stood the test of almost thirty years before the public.

Richmond, Va., March 31, '05.
Jos. Haas, V. S.

Indianapolis, Ind.;

Dear Sir:—I have great faith in your Hog Remedy for just before sending you my order I lost several hogs that were only sick a few days, mixed it thoroughly in wet bran and ship-stuff and fed it to the rest of the hogs every other day, and since then I have found no sickness and have suffered no loss whatever. I cannot recommend your Remedy too highly, and speak of it to my friends and advocate its use at every opportunity. I have quite a large number of hogs to which I am feeding the Remedy regularly and would not be without it.

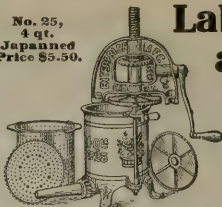
WM. HARPER DEAN.

A LOW-DOWN DRILL.

The Spangler Mfg. Co., of York, Pa., makes what is known as the Spangler Low Down Grain and Fertilizer Drill—a practical machine for all purposes of drilling. Perfectly even distribution of lumpy, damp or dry fertilizer. A machine of this kind increases the profits from your crops. Write to-day for their catalogue—full of information to the farmer. Sent free.

When corresponding with our advertisers, always mention The Southern Planter.

No. 25,
4 qt.
Japanned
Price \$5.50.



Labor and Money Saved at Butchering Time

When the farmer kills, about one half of the hog goes to make lard and sausage. For taking care of these valuable portions he needs just such a machine as shown herewith. It will more than pay for itself in one week's work, and last a lifetime.

ENTERPRISE SAUSAGE STUFFERS

are easy to manage, and they do the work right. The cylinder is bored true. The plate fits true. Meat cannot work up over the plate. The spout is corrugated, preventing air getting into the casing, assuring preservation of sausage. Can be changed to a lard or fruit press in one minute. This is one of the labor-saving machines that save money. Eight sizes and styles. Another is the **Enterprise Meat Chopper**. Cuts sausage perfectly. Look them up in your hardware store, or write to us about them. Look for the name "Enterprise" on the machine. Write for the "Enterprising Housekeeper" a book of 200 choice receipts and Kitchen Helps sent free.

THE ENTERPRISE MFG. CO. of PA., 333 Dauphin St., Philadelphia, Pa.

"PLANET JR." FARM AND GARDEN TOOLS

Seed Drills and Wheel Hoes combined. Single Wheel Hoes, Double Wheel Hoes, Cultivators, Horse Hoes, Sulky Cultivators.

"Planet Jr." No. 8 Horse Hoe & Cultivator

here illustrated, is the most complete of its kind ever offered to the farmer. It is stronger in design and construction. The amount of work and variety of uses to which it may be adapted will only be appreciated and realized after using one for a season.

DESCRIPTION—Frame—Extra long and high—hard to bend and slow to clog.

Shanks—Hollow steel and clamping both sides of frame, strengthening each.

Depth—Regulated by wheel and runner, instantly adjusted by lever.

Expansion—By lever from 3 to 25 inches.

Side Hoes—Arc-forking from and putting to the crop. Set at all angles and are reversible. Can be removed and small steels put on.

"Planet Jr." Catalogue—Postage free to anyone, also our own illustrated catalogue. Trade discount to dealers on all Planet Jr. goods.

FULL LINE FARM TOOLS AND SUPPLIES

Norfolk Farm Supply Co.

WHOLESALE AND RETAIL

Address Care Dept. No. 6.

41-51 Union St., Norfolk, Va.

Water Supply for Country Homes.

Deliver water from spring or stream to house, stable, lawn, storage tank, etc. by the automatic working

RIFE HYDRAULIC ENGINES.

Always going without attention. Raises 30 feet for every foot fall, 80 per cent. efficiency. Large plants for irrigation, equipping towns, railroad tanks etc. Over 5,000 in use. Catalogue and estimates free.

RIFE ENGINE CO., 126 Liberty St., New York, N. Y.



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CASH PRIZES.

We want agents to solicit subscriptions for THE BREEDER'S GAZETTE, and we offer liberal cash prizes to all who get up clubs. Prof. Henry, of the Wisconsin College of Agriculture, styles THE GAZETTE

The Farmer's Greatest Paper.

Thirty-six to fifty-six pages weekly, beautifully illustrated; reports of all the principal fairs, horse shows and agricultural meetings, by the best writers. A handsome holiday number in colors to all regular subscribers. Agents wanted in all unassigned territory. Sample copies, canvassing matter and premium list free if you mention The Southern Planter.

ADDRESS

Sanders Publishing Company,

356 Dearborn St., Chicago, Ill.

GOOD HOUSEKEEPING.

Quick Muffins.

One pint of flour; one tablespoonful of lard; one egg. Make into a thick batter with buttermilk or clabber and just before baking add a teaspoonful of soda, dissolved in a little warm water. Bake in gem pans in a hot stove.

Salmon Croquettes.

One pint of mashed Irish potatoes; one can of salmon, skin and bones removed; five hard-boiled eggs, beat the whites and mash the yolks fine with a tablespoonful of melted butter, pepper and salt. Mix all well, and make into cones or balls; beat the yolks of two eggs, roll the croquettes in it, then roll them in cracker crumbs and fry in any fat. The fat must be boiling hot.

Fried Egg Plant.

Slice the egg plant about half an inch thick; after you have peeled it, lay in cold water with a little salt in it for about an hour. When you are ready to fry it, take out each piece and dry on a cloth, then dip into beaten egg and cracker crumbs and fry in hot lard until thoroughly done.

Baked Pumpkin.

You should have the white potato pumpkin. After taking out the seed, cut into slices and peel. Cut out pieces an inch thick and arrange in layers in a pudding dish or, better, in a flat pan. Pour a small quantity of water into the dish and bake very slowly until tender—it will take four or five hours—pour melted butter on the strips and serve hot.

Chocolate Cake.

Beat two eggs, yolk and white to one cup of sweet milk, one cake of chocolate; put this on the stove and let it get hot through, then set aside to cool. Make a batter of six eggs—beat separately, two cups of sugar, one cup of butter, one cup of sweet milk, four cups of flour—measure before sifting—one teaspoonful of soda, two teaspoonfuls of cream of tartar. Then mix in the chocolate mixture and bake in layers, put together with boiled icing.

Tea Cakes.

Two quarts of flour, one small teacup of lard, one small teacup of butter, three cups of sugar, three eggs, one cup of sour milk, two level teaspoonfuls of soda. Season with cinnamon or mace. Beat the eggs until light, then beat in the sugar. Add the milk with the soda dissolved in it; next, put in a handful of flour and beat until light, then work in the butter, lard and all the flour. Work just enough to mix thoroughly, roll thin and bake in hot oven.

CARAVEN.

When corresponding with our advertisers, always mention The Southern Planter.

RUBEROID® ROOFING

STANDARD FOR 14 YEARS.

The oldest prepared roofing on the market, and the first Ruberoid Roofs laid, many years ago, are still giving satisfactory service under the severest climatic and atmospheric conditions.

Contains no tar or paper; will not melt, or tear. Acid fumes will not injure it.

Outlasts metal or shingles. Any handy man can apply it.

There is only one Ruberoid Roofing, and we sell it. You can verify its genuineness by the name on the label and on the under side of every length of Ruberoid Roofing. Send for samples and booklet.

A large stock of Corrugated and V. Crimp Roofing always on hand.

Southern Railway Supply Co.,
1323 East Main Street.
RICHMOND, VA.



Steel Roofing, \$1.50 Per 100 Sq. Feet

Painted red both sides; most durable and economical covering for roofing, siding or ceiling, for barns, sheds, houses, stores, churches, cribs, poultry houses, etc.; easier to lay and cheaper than any other material; no experience necessary to lay it—just a hammer or hatchet, the only tools you need. At this price to all points east of Colorado, excepting Oklahoma, Texas and Indian Territory. At this price we furnish our No. 16 semi-hardened flat steel roofing, sheets 24 inches by 24 inches. At \$1.50 this same material corrugated as shown in illustration, or in "V" crimped, or standing seam. At 50 cents per square advance over above prices we will furnish this material in 6 and 8 feet long; \$2.25 for brick siding or beaded ceiling or siding. Send us your order for immediate shipment. Time will prove its enduring qualities. It withstands the elements the best of all coverings. Ask for further particulars. **WRITE FOR FREE CATALOGUE NO. A. M. 166** on building material, wire, pipes, plumbing material, furniture, household goods, clothing, etc. We buy at SHERIFFS' AND RECEIVERS' SALES, 100,000,000 feet of lumber from the World's Fair. **CHICAGO HOUSE WRECKING CO., 35th and Iron Sts., CHICAGO, ILL.**

When corresponding with our advertisers always mention SOUTHERN PLANTER.

DON'T BUY GASOLINE ENGINES

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline engine superior to all one cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost—portable, stationary or traction. Mention this paper. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mfrs., Meagher & 16th Sts., Chicago, THIS IS OUR FIFTY-FIRST YEAR.



LOCK UP YOUR LETTERS! FREE THIS MAGNIFICENT STEEL SAFETY BOX DOUBLY REINFORCED.

A Private Place for Private Papers.

STRONG LOCK. INTRICATE KEY. LARGE and ROOMY.

Brilliant Black, Trimmed in Maroon and Gold. A luxury to Any One. A Necessity to Every One. Contents Safe as a Buried Treasure. We will give you this splendid Steel Safety Box absolutely free and send it prepaid to any address for selling 20 packages of our Ivory White Baby Cream at 10c. each. We send the goods prepaid, trust you with them until sold, and send you the Safety Box the very day we receive your remittance.

The Baby Cream sells on sight. Keeps children's skin perfect. Cures every trouble. Gives instant relief. Elegantly Perfumed. Delicately medicated. Antiseptic. Snow white. Ladies use it on themselves. Keeps their skin like velvet. Circulars tell all about it.

Write at once and earn this elegant Safety Box.

BRAUER CHEMICAL CO., 426 Postal Building, New York

MINCE MEAT.

We wish to thank "Subscriber's Wife" for her kind words about our work for the PLANTER. We think that either of the following receipts for making mincemeat, which she asked for will prove successful if followed.

Boil gently until tender two pounds of lean beef. Let it get perfectly cold and then chop fine.

Four pounds of apples, peeled and into small square pieces.

One pound of citron, shredded.

Two pounds of raisins, seeded and chopped.

Two pounds of Sultana raisins.

One pound of currants.

Two pounds of sugar.

One juice and grated rind of two lemons and two oranges.

Two nutmegs, grated. Half ounce

of cloves, half ounce of cinnamon, half

ounce of mace, teaspoon of salt.

Crush the spices.

One quart of wine, one pint of

brandy or whiskey.

Mix all the dry ingredients to-

gether, add the juice of the lemons

and oranges and add the liquor. Pack

in stone jars and it will keep a long

time. You may have to add more

liquor when the pies are made.

Apple cider may be used instead of

the wine.

This is a very old receipt and the

best I know anything of.

MINCE MEAT NO. 2.

Two quarts of cold, boiled beef

chopped fine.

One pound of crumbled suit.

Three pints of apples, peeled, cored

Two pounds of seeded raisins,

and chopped.

Two pounds of seeded raisins.

chopped.

Three pounds of currants, cooked

just a little while.

Half pound of citron, shredded.

One quarter of a pound of butter.

One quart of stewed dried apples.

The juice and rind of two lemons.

One tablespoon of salt.

One tablespoon each of pulverized

cinnamon, allspice, cloves, mace,

ginger, nutmeg.

One half gallon of sweet cider or

wine. Three pounds of brown sugar.

CARAVEN.

PLANTER'S ENGINES



No other power gives such all round satisfactory service as steam. A line of engines and boilers specially adapted to the needs of farmers and planters is

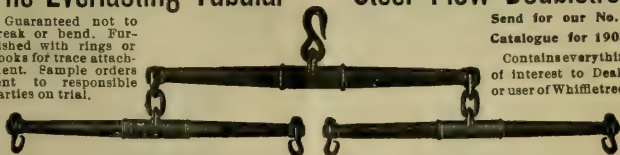
The Leffel

They take but little space, are famous for efficiency, quick steamers, last many years and cost little for repairs. Many styles from 3 h. p. up, include Upright, Portable, Horizontals on skids or for walking in, engines mounted on boilers or with separate base, etc. Don't buy any power until you have sent for our book "Power Economy and Efficiency."

THE JAMES LEFFEL & CO., Box 154, Springfield, Ohio.

The Everlasting Tubular

Guaranteed not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



Steel Plow Doubletree

Send for our No. 8

Catalogue for 1905.

Contains everything

of interest to Dealer

or user of Whiffletrees.

PATTERN No. 105 EQUIPPED WITH FORGED TRIMMINGS.

Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

Pittsburg Tubular Steel Whiffletree Company,

SOLE MANUFACTURERS

PITTSBURG - - PENNSYLVANIA.

The Chesapeake & Ohio Railway

Extending from Cincinnati and Louisville, and

THROUGH ITS CONNECTIONS....

THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;

THE OHIO CENTRAL LINES, from Toledo and Columbus;

THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest **ROUTE.**

TO STAUNTON, LYNCHBURG, CHARLOTTESVILLE,

RICHMOND, PETERSBURG, NORFOLK,

And Principal Virginia Ports.

H. W. FULLER, Gen. Pass. Agt. C. & O. Ry., Washington, D. C.

ROCKBRIDGE PEERLESS PREPARED AGRICULTURAL LIME

Process Patented August 13, 1901.

Packed in 50 lb. Sacks—Easy to Handle.

Can be Drilled With the Seed.

More Efficacious Than Air-Slaked Lime.

Address **ROCKBRIDGE LIME AND STONE CO., LEXINGTON, Va.**

As will be noticed by their advertisement in this issue, Darling & Company, of Chicago, Ill., the pioneer Poultry Food and Supply manufacturers of the West, have established a factory in New York. This will enable them to handle more advantageously the trade they have already built up in the Eastern and New England States. Their trade relations are already established. The Darling products have been selling on their known high quality, and the volume of sales in the East for the last two years has just about kept pace with those in the West. After all, it is not so much a matter of location, as of having the goods to deliver. The Darling people know the value of a good reputation. They acquired theirs while located at the Union Stock-Yards, Chicago, where they had every sort of poultry food material at hand. Selling only high class goods has done so much for them, that naturally, they will adopt the same high standard at their Eastern factory. Their Eastern branch will manufacture Darling's Poultry Foods and Supplies directly under the supervision of Darling's experts. This will insure the Eastern trade receiving fresh, sweet and wholesome foods and supplies directly delivery. They are an honorable concern, manufacturing only the highest grade goods it is possible to produce, and we commend them heartily to the notice of our readers.

It is special work to grow seeds on the farm, and any farmer who depends upon himself for the seeds to be used next year must be very careful or his varieties will be mixed. The wind, bees and other insects distribute pollen, and although the effects of involuntary crossing of varieties may not be noticed this season, there will be no mistake of results next year.

Underwood Typewriter.

ONLY STANDARD VISIBLE TYPEWRITER.



The UNDERWOOD TYPEWRITER has been awarded three GRAND PRIZES in the last year.

Louisiana Purchase Exposition, St. Louis,
International Congress, Liege, Belgium.

ANI
Lewis & Clark Exposition, Portland, Oregon.

If you are interested in a typewriter let us send you a catalogue, or have one of our representatives call and demonstrate our machine to you.

RICHMOND, VA. Branch,
1212 East Main St.

When corresponding with our advertisers always mention the
SOUTHERN PLANTER.

A FEW SPECIALTIES.



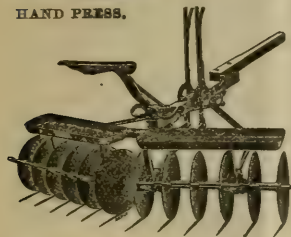
HAND PRESS.



FULL CIRCLE HORSE POWER PRESS.



PEA HULLER.



DISC HARROW STEEL WEIGHT BOXES.

We are sole manufacturers of the WATT, CROWN and CRESCENT Plows, made in sixteen sizes, and with interchangeable mould boards, adapted to every variety of work. They are sold on their merits and are guaranteed to give satisfaction.

DISC HARROWS with solid steel weight boxes. MOST DURABLE BEARINGS, with oil hole directly over axle, free from dust and clogging. ANTI-FRICTION ROLLERS, ADJUSTABLE SEAT, LIGHT DRAFT. Made in fourteen sizes.

ALL STEEL LEVER HARROWS. One, two or more sections. Teeth instantly adjustable to straight or slanting without stopping team.

STEEL RIM ROLLERS with SOLID STEEL HEADS, which keep the earth from getting inside the drum, making the roller absolutely rigid. Built in seventeen sizes, with one, two or three sections.

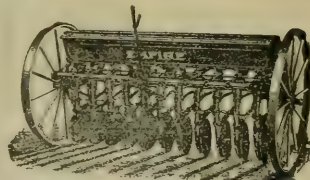
THE MANURE SPREADER doubles the value of manure by covering two acres instead of one by hand, and will do the work of ten men with forks. The lowest down spreader made, making it easy to load.



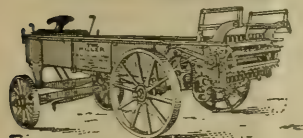
SOLID STEEL HEAD ROLLER.



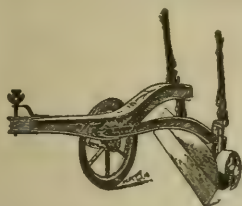
LEVER HARROW.



THE EMPIRE GRAIN DRILL



THE MANURE SPREADER.



THE UNIT ROAD MACHINE.

Has but ONE WHEEL, and requires but ONE TEAM and ONE MAN to operate it. By actual test it has been demonstrated that with one man it will build more and better road than can be done by ten men with the usual tools. That it saves labor enough to pay for itself every two days when in use. FOR FARM WORK it has no equal for road work, cutting down ditch banks, opening drains, leveling and other purposes. THE PRICE brings it within the reach of all.



THE IMPERIAL WAGON.

ROAD PLOWS, ROAD ROLLERS, WHEEL and DRAG SCRAPERS GASOLINE ENGINES, CORN HUSKERS AND SHREDDERS, CANE MILLS AND EVAPORATORS, GRINDING MILLS for all purposes, CORN SHELLERS for hand or power.



COMBINED MILL and HORSE POWER.

BALING PRESSES for hand, horse or steam power, FERTILIZER AND LIME DISTRIBUTORS, HORSE POWERS, ENGINES, SAW MILLS, WOOD AND POLE SAWS, POTATO DIGGERS, FEED CUTTERS.

13 S. Fifteenth St., Between Main and Cary.

Established by GEO. WATT, 1840.

THE CALL-WATT CO.,

MANFRED CALL, Gen'l Manager,
RICHMOND, VA.

Fine Groceries, Feed and Liquors.

J. S. MOORE'S SONS, Inc.,

JUGS FREE.

1724 East Main Street,

RICHMOND,

JUGS FREE.

VIRGINIA.

Dunlop Flour, per barrel.....	\$5.00
Good Teas, Green, Black and Mixed, per pound.....	30c., 40c., 50c., and 60c.
Obelisk Flour, per barrel.....	\$5.00
Granulated Sugar, per pound.....	5c
Arbuckle's Coffee, per pound.....	14-1-2
Good Salt Pork, per pound.....	7c
Choice Salt Pork, per pound.....	9c
Best Salt Pork, per pound.....	11c
California Hams, per pound.....	9c
Mother's Oats, per package.....	9c
American Oats, per package.....	7c
Mother's Oats, per package.....	9c
Daisy Flour, per barrel.....	\$4.50
Pillsbury Flour, per barrel.....	\$6.00
Cut Herring, per dozen.....	3 doz for 25c.
Roe Herrings, per dozen.....	15c
Cut Herrings in barrels, new.....	\$4.00
Cut Herrings, per barrel.....	\$2.25
N. C. Roe Herrings, half barrel, new.....	\$3.00
Salt, 200 pound sacks.....	25c
Salt, 100 pound sacks.....	45c
Sugar Cured Ham, per pound.....	15c
Best Timothy Hay, per ton.....	\$17.00
Best Bran, per ton.....	\$ 2.00

Brown Stuff, per ton.....	\$0.00
Ship Stuff, per ton.....	\$21.00
Corn and Oat Chop, per ton.....	\$1.00
Coarse Meal, per ton.....	25.00
Mackerel in Kits, per kit.....	1.00
Lake Herrings in Kits, per kit.....	75c.
Table Peaches, per can.....	12c.
Large Cans Tomatoes, 9c. can of 3 cans for.....	25c.
Small Can Tomatoes.....	6c.
Lump Starch, per pound.....	4c.
Sardines, per can.....	4c.
Best Feed Oats, per bushel.....	38c.
Rice, per pound.....	5c., 7c., 8c.
Hominy, per pound.....	24c.
Genuine N. O. Molasses, per gallon.....	60c.
Porto Rico Molasses, per gallon.....	50c.
Breakfast Bacon, per can.....	45c.
Best Cream Cheese, per pound.....	15c.
Best Water Ground Meal, per bushel.....	70c.
Octagon Soap, per bar.....	45c.
Hustler Soap, 11 cakes for.....	25c.
Circus Soap, 7 bars for.....	25c.
Lenox Soap, 7 bars for.....	25c.
Export Soap, 7 bars for.....	25c.
Smoked Bacon, per pound.....	13c.

Pure Lard.....	11c.
Good Lard.....	9c.
Small Can Good Luck Powders.....	70c.
Good Corn, per bushel.....	70c.
Large Can Good Luck Powders.....	8c.
Large Prunes, per pound.....	15c.
Three Plugs Peach, Grapes, Plums and Sun Cured Tobacco for.....	25c.
Can Corn, per can.....	8c.
Old Crown Rye, per gallon, 5 yrs. old.....	\$3.00
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Old Excelsior Rye, per gal., 3 yrs. old.....	2.00
Old Capitol Rye, per gal., 2 yrs. old.....	1.50
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Geneva Gin, per gallon.....	1.50
London Dock Gin, per gallon.....	1.50
Pure Apple Brandy, per gallon.....	1.50
Good N. C. Corn Whiskey, per gallon.....	1.50
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66th Year.

Richmond, Va., December, 1905.

No. 12.

Farm Management.

WORK FOR THE MONTH.

Another year has rolled around and December is with us again. Seed time and harvest has not failed us, and farmers throughout the whole country have much to be thankful for in the abundant yield of the crops. Corn is the greatest crop ever grown in this country, making an estimated yield of over 2,700,000,000 bushels, whilst wheat, although not so large a crop as has been made once in the past, is a large crop; greatly in excess of that of last year. Oats also have made a large crop and all the forage crops have made good yields. Cotton, the staple crop of a large section of the South, will be an exception to the rule of increased production, as it is not likely to exceed 10,000,000 bales, and some estimates place it even much lower than this yield. A careful examination of the figures compiled by the Department of Agriculture would seem to indicate that Southern farmers have great cause to be thankful for the results attained by their labor and care. Notwithstanding a severe and long winter, and a cool late spring, crops have made in the greater part of the South more than average yields. Corn in Maryland have made an average yield of 36½ bushels per acre as against a 10 year average of 31 bushels; in Virginia the yield is 23 bushels as against a 10 year average of 20½ bushels; in North Carolina the yield is 13½ bushels, as against a 10 year average of 13 bushels; in South Carolina the yield is 10½ bushels as against a 10 year average of 9½ bushels; in Tennessee the yield is 24½ bushels, as against a 10 years average of 22 bushels, and in West Virginia the yield is 29½ bushels, as against a 10

year average of 25½ bushels. The average yield of corn throughout the country is 28½ bushels per acre, as against a 10 year average of 24½ bushels. Whilst the yield in the Southern Atlantic Coast States is with the exception of Maryland, below the average of the yield throughout the country, yet there is a very considerably increased yield per acre over what was the customary yield 20 years ago. This gradual increase in productive capacity we attribute largely to the better breaking and cultivation of the soil before the planting of the crop, and the adoption of a system of *farming* rather than *planting*, a system of rotation of crops, coupled with the keeping of live stock, and the production of leguminous crops as feed for the stock, and as recuperative crops, to be turned under, and thus with the aid of the manure made by the stock and the supply of humus to the soil, the putting of microbic life into the soil. This life is of infinitely more importance to the productive capacity of the soil than any other one factor in securing heavy yields. This life cannot be had or be maintained in the soil until an alkaline condition has been secured by the use of lime, hence our constant insistence of the necessity for the use of lime on all our Southern lands. With this life in the soil secured and perfect preparation of the soil, there is no reason whatever why these Southern States, with their magnificent climate and absence of drouths, should not produce greater yields of corn than any other States in the country. The South has made in the past in exceptional cases, the greatest yields of corn that have been made anywhere in this country, there is no reason why these exceptional cases should not be made the rule instead of the exception.

The cotton crop returns are not yet available for comparison, and therefore we pass this crop by. Turning to tobacco, the returns show that the yields are in excess of the average though only slightly so in some cases. Irish potatoes and sweet potatoes are also in excess of the average, whilst the hay yield compares most favorably with that of any State in the country, the yields in the Coast States being, in most cases, even in excess of the Northern and Middle States. This goes to show that we can successfully produce hay in competition with any State in the Union, if only proper attention is given to the preparation of the land before attempting the production of this crop. It is no use trying to grow hay on poorly prepared land, lacking in humus. Make the land rich in humus and prepare it finely, and hay can be produced in the South as successfully as anywhere in the country, and the market for it is right at home. This market is now largely monopolized by the West and North, which ship hundreds of car loads every year to Southern cities. The apple crop of Virginia, whilst by no means a full one, has yet been exceptionally better than that of other apple producing States, and has sold at very remunerative prices.

One most pleasing feature accompanying these satisfactory returns is that the prices for all our staple crops are good, in nearly all cases in excess of the average for years past, and we do not look to see any reduction in these prices, as the demand for all staples is good, both for home consumption and for export, and whilst labor continues to be so well employed, both at home and abroad, as it is at present, and seems likely to be for many months to come, there can be no serious fall in prices.

It is too late now to seed any crops, except it may be rye in the Coast and middle sections of the Coast States, and even for rye, this is very late and the success of the crop seeded will largely depend upon the mildness of the winter. One exception, however, may be made to this statement, and that is a favor of Canada peas and winter oats, which may be with advantage, sown in this month in the Tidewater section of this State, and North and South Carolina. In the middle sections of these States, January and February are the proper months in which to seed this crop, and further west, it may be sown in March. This crop is essentially a cool climate crop, but it may be most successfully grown in the South, if seeded early enough, so that its growth is completed by May. It will not stand our hot weather at all. Where got in early enough on land in a good state of fertility, it is a most valuable crop for early green feed, and for hay, and is of a highly nutritious character, and it may and should be got

off the land in time to plant corn or cow peas for a summer crop. It makes also an excellent grazing crop for hogs. Sow two bushels of peas to the acre, put them in deep, either with the drill or a cultivator, and then sow $\frac{3}{4}$ of a bushel of Winter or Burt oats and harrow in so as to cover them well, but not to put them quite so deep as the peas. If the land which should be deeply broken and finely prepared is not in a good state of fertility, apply 300 lbs. of acid phosphate per acre broadcast, and harrow in before seeding the crops. Do not graze the crop until the pods are formed and peas in them, and if intended for hay, cut when the pods are just beginning to ripen and cure in the same way as a clover crop.

So long as the weather keeps mild and the land unfrozen, keep the teams at work plowing all land not seeded with fall sown crops, intended to be cropped next year. By the adoption of this system very much may be done to relieve the pressure of work in the spring and much benefit may be conferred on the land which will be seen when the next year's crops are harvested. We are well aware that in advising this course we are running counter to the opinion of many farmers in the South, who maintain that as we do not have the hard frosts common in the North and which do so much to ameliorate the physical condition of the land there during the winter, that winter plowing ought not to be done in the South. We entirely dissent from this view. Whilst Southern farmers have always been noted for plowing and seeding wide areas of land, they have in our opinion, never half plowed and prepared the land sufficiently in order to secure the best results. If they had plowed half the area and properly prepared that half, the returns would, in our opinion, have been greater than have been the average on the large area seeded. Because we have not the frost to help to make the breaking of the land more effective, in stead of being a reason for not doing the work at all is in our opinion only the greater reason why the work of breaking the land should be done in the winter. That the best crop returns can only be had on land thoroughly and deeply broken, experience has abundantly demonstrated, and this thorough breaking of the land over a considerable area, can only be secured by utilizing the winter months. The hot weather usually sets in so soon in the spring that the time within which the work can be done is too limited to permit of completion of a large area at that season, unless much more than the average team required to work the farm the year around, available in the spring, and to keep this team for use at that season only, insures a heavy tax on the crop.

production and farm which cannot be justified by any sound economical law or reason. Besides not to use our mild winters in that way is to neglect to utilize one of the greatest factors which our climatic location places in the hands of our farmers. If we do not utilize this time, we might as well be living in the cold frozen north and be consuming unprofitably the products of the farm, instead of utilizing them profitably. There are also two other reasons why this work should be done now. The first is that only by so breaking the land deeply in the fall can we be certain to secure in the depths of the soil that moisture which we always need during our hot summer weather to ensure the heaviest crop production. Land in the fall is usually hard baked at the surface, and especially is that so this year when we have had so long a dry season. Land in this condition is in no shape to absorb and conserve moisture. The rain that falls runs off the surface quickly into the creeks and rivers, and is lost forever. Broken deeply, the land will absorb the moisture as it falls and it will be conserved there and make available latent fertility in the soil, and both will become available for the crop in the hot dry days of the summer. This deep breaking will also ensure an end of the gullying and washing of the soil, which has made so large an area of the South unprofitable and an eye sore. Give the water an opportunity to get into the subsoil, and it will cease to carry off the surface soil, and thus make possible the production of good crops on thousands of acres not now producing anything. Another reason in favor of winter plowing in the South is that it is called for by the natural condition of the land. Prof. King, the greatest authority on soil physics in this country, who has made a study of the lands in all sections of the country, says: "Southern soils have much less pore space and openness than is characteristic of the best northern soils. This openness of structure in soils is an extremely important character, for it determines not only their capacities for both air and water, but also the freedom and rapidity with which these indispensable component parts of all fertile soils move into and out of the root zone. It even determines in very large measure the depth of the root zone itself, and thus the magnitude of the feeding area available to the crops, which in turn, is a prime factor in determining the fertility of all field soils. Not only do the soils of the North and South differ in their openness of structure, but the soils of the South have a less complete and less strong granulation, and these two characters are extremely important in determining not only the freedom with which both rain and air enter and leave the root zone, but at the same time, they influence the depth to which roots penetrate the soil. The larger pore space and coarser and stronger granulation provide

greater capacity and better facilities for the storing of the rain as rapidly as it falls, and as a consequence of this difference in the character of the soils in the two contrasted regions, there is better under-drainage less surface washing of fields, and less loss of water soluble plant food in the North, while the roots of crops generally penetrate the soils much more deeply than they do in the South. Whenever heavy rains fall on the Southern soils under consideration, their close structure and feeble granulation result in the surface pores of the soil becoming so quickly and extensively closed that the soil air finds little opportunity to escape and yet only so fast as it does can the rain enter the soil, and hence during heavy rains, the water accumulates quickly and extensively on the surface. The result is that the surface soil after having lost much of its coarser granulation, is readily taken up by the water held at the surface, and its finer and more valuable portions, together with the rapidly water soluble plant food and organic matter are borne away in the surface drainage to the great detriment of the fields. What then shall be done to establish a deeper openness and coarser granulation in the soils of the South Atlantic and Gulf Coastal plains in order that there shall be lost in the surface drainage less of the most valuable portions of the surface soil, less of the undecomposed organic matter, and less of the readily water soluble plant food which collects on the immediate surface through rapid evaporation, aided by capillarity. *There can be little doubt that deeper plowing will not only lessen the tendency of Southern soils to wash, but that it will increase their general productive capacity.* The winter is the proper time to do this work both economically and effectively, and we urge that attention be given to it. Land may be deeply broken now without fear of its crop productive capacity being lessened in the coming year. There is ample time for the new soil turned up to become aerated and its plant food to be made available in the coming year if the work is done now. Done later, this will not certainly be the case. Never mind the remarks of the man who tells you that the work will have to be done over in the spring, as the soil will all have run together again by that time. Possibly the surface of the soil will have run together somewhat, in the absence of frost, which would keep it open, but this surface compaction will not take half so much breaking in the spring as would the unplowed land, and can usually be done quickly with a Disc, Cutaway or Acme harrow, or in the absence of these tools, with a good heavy drag harrow, with sharp teeth. This extra working of the land will be time well spent and will be amply repaid in increased crop production.

The work of clearing up new land or land which has not been under cultivation for some years, and which it is intended should be cropped next year, should receive attention. Whatever you do in this line let it be well done. Clean out thoroughly all stumps and rocks. Do not leave the large ones to be plowed round and become harbors for trash and disease producing germs and weeds. A few sticks of dynamite and a few cartridges will make short work of these hindrances to good, clean cultivation, and their use will give a good sub-soiling of the land upon which they are exploded. Gather up all rocks and haul them off the land to repair and make good roads across the farm. Utilized in this way they become valuable improvers of the farm and savers of time and expense in hauling.

This also is a convenient and proper season for draining all wet land. Whatever is undertaken in this line let it be done in the best possible manner. Draining is a work that should last for a lifetime, when once done and if done properly, it will do so. Before starting, have levels properly taken so that the main drain and outfall may be so placed as to ensure a perfectly free outlet for the water with plenty of fall, and let the lateral drains be so located as to empty into this drain without danger of being obstructed. Drains to be effective should be at least three feet deep, three feet six inches is often better. It is not the surface water that causes the trouble in wet land, but the underlying water. Carry this off in good tile drains and what falls on the surface will soon find its way into the depths of the soil. When filling the drains after the tiles or poles are laid, fill solid with the clay which has come out of the drain. Do not put rocks or brush in on the top of the tiles or poles. A drain filled tight with clay will dry a piece of land over a much larger area and much more effectively than will a loosely filled drain. We have tried both ways and write from experience.

Old fences should be repaired and be relocated where necessary, for more convenient working of the land. Arrange the fields so that they will readily adapt themselves to a good rotation of crops and set up fences so that each field can be used independently of the adjoining ones, and as far as possible, so locate these fences as to obviate the necessity for crossing one field to get into another. Fix gates in the fences at convenient points and hang these so that they will close themselves after being used, and thus obviate the risk of loss from gates being left open or rails left down. Old worm rail fences should be got rid of as fast as possible. They waste land and form breeding places for weeds and insect pests.

The rails in one of these fences, when utilized with some wire may be made to fence in a much larger area and occupy much less land. Make the fences straight as far as possible, setting posts at the proper distance apart for the old rails and fasten these to the post with wire running up one side of the post, and down the other with loops left to hold the rails.

Have the ice pond cleaned out and all dirty water drained away from the source of supply, so that only pure water be frozen. See to it that the ice house is cleaned out, repaired and made ready for the crop. If you have no ice house, this is the time to build one. In a recent issue a correspondent gave a description of one which he had built, which is effective. What is needed is practically a house within a house, with a space of 12 inches between the walls, filled with sawdust or some similar non-conductor, and with a roof made in the same way. Let the house have a good drain carried into the center of the floor, which should be trapped by having a curved or "S" pipe into it, which will stand full of water and thus prevent ingress of air. Provide ample ventilation in the gables of the roof to carry off all stagnant air. When filling the house, pack sawdust around the ice and cover with a foot of sawdust, and on the top of this, plenty of waste hay or short litter.

See to it that you have plenty of dry wood brought up to the house for the convenience of the women folk and the comfort of all.

FERTILITY IN LAND.

Editor Southern Planter:

Apropos of Mr. Karn's article in the November issue on the "Question of Fertility," there doubtless are cases where raw clay thrown out when a cellar or a well is dug, has helped the fertility of the surface soil. One such occurred near me where the clay, or rather imperfectly decomposed bed rock taken out in digging a well, improved the vegetation where it was thrown, and being afterwards spread over a field, caused marked and lasting improvement there. But that well, I have good reason to think, cut a vein of "apatite," which is a mineral rich in phosphoric acid. Such veins are not uncommon in crystalline rocks. The case cited by Mr. Karns, the clay being taken from under a barn, was most likely clay which had in the course of time absorbed liquid manure, or there may have been some manure mixed in it. Several years ago, some New England farmers

found their old barn sites to be veritable fertilizer mines, and there are places all around the coast where the Indians camped, that are noted for great fertility to a good depth, shells, bones, and ashes of wood having accumulated there, but as a rule raw clay rarely helps common soils, and does not make a suitable home for plants. To illustrate that, we need nothing better than the cuts and fills made in building our railroads and cities: We all know that newly thrown out clay refuses to grow anything. After a time it gets covered with vegetation which is sometimes very rich, but more often, quite meager. On the Western prairies and river bottoms, where there is some humus the vegetation starts soon. On soils rich in plant food and except for lack of humus, otherwise right, life starts slowly but finally becomes abundant. In the spring of 1863, I walked over a newly made railroad grade outside the town of St. Mary, Ontario, which is in the middle of a very fine raw clay and gravel; not a speck of vegetation; after an absence of twenty-six years, I saw it clothed with a most luxuriant growth of grasses and clovers. On my own farm I see Japan clover creeping up the slope of the railroad grade from the level of the adjoining land. Two summers' growth have covered places made from rich alluvial soil, which carried some humus, but those made from raw clay and partially decomposed rock will take many years before they can support the scantiest vegetation. I know by experience, however, that an application of rotten farm yard manure would start the most barren land in new life. That is just what landscape gardeners do in newly graded city lots and parks. Chemical analysis may show that such raw clay carries plant food in abundance but *it is not available*, furthermore, *tillage by itself will not make it available*. Like man when God made him first, the breath of life must be breathed into it. Manure gives it a start in life by supplying the necessary living organisms, and the humus to support them, while a beginning is made at least. As I take it, supplying life and *humus* are the important functions of manure, adding plant food being a side issue.

I don't know who originated the proverb, "Deep and fine tillage is manure to land." It is not true as generally understood. But if we include humus as a constant constituent of "land," it is very true. Tillage to a field is what poking is to a fire, namely, bringing the soil and the air into fullest contact, and as the oxygen of the air burns the humus, the faster for the tillage; it follows of necessity that if we would till deep and fine we must supply plenty of

humus to burn as surely as we must supply coal the more if we poke the fire or turn on the draft. Our old fields are the best evidence of the truth of this. "All tillage and no humus made the father rich and the son poor" (excuse the paradox.) "Constant clean tillage in cotton and corn burnt out the vegetable matter and a repetition of tillage, no matter how "deep and fine," will not restore humus—the very life blood of fertile soils—far from it. It will only make matters worse. If you don't believe this, just try plowing and harrowing the raw clay of a newly filled city lot to fit it for growing flowers and lawn grass, without applying manure also.

Beside all this raw clay is sometimes positively poisonous to plant life when first brought up. This is quite common in flat countries underlaid by clays; in which case before deep tillage should be undertaken, drainage must be done, not so much for the purpose of getting rid of water as for allowing the air to penetrate such clays to oxydize those poisonous substances. In some places in the "low grounds" of Gloucester County, Va., such poisonous clays are quite common, and the water in shallow wells located in those places smells strongly of sulphuretted hydrogen—like rotten eggs—thus clearly advertizing a lack of oxygen. That sulphuretted hydrogen is nearly as fatal to all life as the fumes of burning sulphur itself.

The course Jethro Tull followed, or the Rev. Samuel Smith's plan of raising wheat at Lois Weedon, or Sir John B. Lawes, experiments in continuous wheat raising do not upset my contention at all. It goes without saying that they began on common soil, which had life and humus in it already and the roots and stubble of the wheat gave *humus enough for their needs in their climate*. Besides most clays carry nitrogen locked up in unavailable combinations which is gradually liberated by cultivation. It must be remembered that the wheat stubble was at once plowed under and thus became humus in a little time. That is a very different thing from the land killing practice here in the South of breaking land with bull tongues which do not bury the sod, or "trash" but leave it on the surface to oxidize there fruitlessly; whereas were such vegetable matter covered in the soil it would soon make an abiding place for microbe life and its carbonic acid would be liberated slowly within the soil where it would be of great service in decomposing rocks and rendering plant food available. In fact it is one of Nature's best agents in that line. Besides, England has not such long or so intensely hot summers as we have

here, and as a consequence, vegetable matter does not decay so rapidly there, but as growth and decay are the measure of one another, it will be seen that we have greatly the advantage. In truth we can make two crops in one year more easily than they can make one in England. A crop of corn and a manuring crop of peas can with ease be made in one season here; likewise of wheat or oats and peas, or cotton can be put in rotation with hairy vetch, or even rye. Such a course as that I take, I take it, will solve the "Question of Fertility," followed in connection with deep and fine tillage. In a word tillage and humus are the complements of one another, and like Faith and Works, they are inseparable.

JOSHUA FRANKLIN.

Clay County, Ala.

SYSTEMATIC RECUPERATIVE ROTATION.

Editor Southern Planter:

Recuperative rotation is the very life of successful farming. It was so recognized by the ancients, and when Rome was at the extreme height of its glory, prosperity and affluence, Virgil and Pliny wrote that rotation was, at that day and time, considered of such vast importance, that crops were grown for the sole purpose of feeding the succeeding one.

So also, it has long been the practice with English landlords to formulate with great minuteness a system of rotation, and to require a strict conformity thereto on the part of the tenants, which has resulted in the fact that the fertility of their soils has steadily increased. Don't imagine for one moment that this increase of fertility of British soils has been brought about by rotation alone; not at all. British ships have ransacked the whole earth in search of fertility, and small as the British Isles are, they have laid the whole world under tribute for the means to bring about this increase in fertility of lands that were originally sterile and unproductive. The islands of the Southern seas have been exhausted of their "guano," the nitre beds of Chili, the potash mines of Germany, the supply of hard wood ashes of Canada, the phosphate deposits of Florida, Carolina and Tennessee, and even the human bones obtained from the battle-field, have each and all contributed their share toward this increase in fertility, and the end of this recuperating process is not yet in sight; on the contrary, the amount of plant food material consumed is growing larger and larger with each succeeding year, and this in spite of the persistent prac-

tice of a systematic, scientific, recuperative rotation. So then the persistent practice of recuperative rotation is not sufficient, by itself, to increase fertility. Far from it, it is not even sufficient to maintain fertility, where the land is already fertile; much less to create fertility where it is not. Yet it is the first step toward good farming; and so essential, in fact, so absolutely indispensable is it, that *successful, profitable farming cannot be carried on* for any long continued period of time, even on the most fertile of soils, *without it*. Any soil will soon grow "sick" of growing any single crop continuously for a number of years, and will after a while refuse to grow that crop. The principle on which rotation is based is very simple, namely: That crops of the same food requirements, methods of growth, etc., should not be grown continuously, but alternating with crops differing in all these particulars. When any crop is grown continuously, there is a constant drain on the food elements consumed by that crop. As some crops are mainly nitrogen eaters, potash eaters, or phosphoric acid eaters, or rather, make larger demands on one single element than another, their continuous growth on the same land causes a one-sided exhaustion of the soil elements; that is, one or two elements are exhausted, while the others are present, possibly in excess, but inoperative because out of proportion, "unbalanced." This condition of "one-sidedness" is just as fatal to the fertility of the land for the single crop in question, as though all the food elements were absent. By rotating the crops, first a potash, and then a nitrogen, and then a phosphoric acid consuming crop, the food that one class of plants does not eat accumulates in the soil for the service of the plants that do demand that very thing, and less expense for fertilizing is necessary than where one crop is grown exclusively.

It is easy to be seen that, advantageous as the above outlined rotation undoubtedly is, there is not the slightest particle of recuperation or increase of fertility in it. It is simply a husbanding of one's resources, and handling them to the best advantage.

We come now to "recuperative" rotation, which is something more than that described above, for the reason that, if recuperative, there must, in order to make it recuperative, be an actual increase in fertility derived therefrom. The clovers, cow-peas, vetches, etc., form what are known as "recuperative" or renovating crops; and whatever system of rotation may be decided upon as best to follow in each individual case, some one of these legumes should be introduced into the rotation as often as every second or third year. But, why so often? Because these legumes enrich the soil in nothing but "nitrogen," and it has been abundantly demonstrated that the nitrogen furnished by a leguminous crop is mostly

consumed by the first succeeding crop, and is all used up by the second year.

Now these leguminous crops are simply a trap for the purpose of catching "nitrogen," and the bait used is potash and phosphoric acid, as all the legumes are greedy devourers of both; and cannot possibly thrive in any place where these substances are absent, or even deficient. The greater the amount of potash and phosphoric acid present in any given soil (whether naturally present or artificially applied), the larger will be the amount of nitrogen drawn from the air.

For crimson clover, or vetch, use per acre 600 pounds of the following:

Available phosphoric acid	...10 per cent.
Potash	.....12 " "

For red clover, use per acre 500 pounds of a fertilizer, containing:

Available phosphoric acid	.... 9 per cent.
Potash	.....14 " "

For cow peas, use per acre 400 pounds of a fertilizer, containing:

Available phosphoric acid	...10 per cent.
Potash	.....10 " "

The idea in making these seemingly liberal amounts of the mineral fertilizers is, to make, and keep, the plants "nitrogen hungry," for it is an established fact that, if liberal quantities of phosphoric acid and potash are supplied, and nitrogen not given, the plants absorb sufficient nitrogen from the air to balance the supply of phosphoric acid and potash already used, and not a particle more. The larger the amount of phosphoric acid and potash supplied to the crop, to the limit of its healthy feeding, the greater is the assimilation of the free nitrogen of the air; and so financially, the larger the investment in phosphoric acid and potash, within the above limits, the greater the repayment or dividend in the form of the more expensive nitrogen.

G. H. TURNER.

FARMING IN VIRGINIA.

Editor Southern Planter:

A correspondent in Illinois who thinks of investing in land in the southside of Virginia asks, "Why it is that blue grass does not grow naturally in Mecklenburg and Halifax counties of Virginia, nor anywhere east of the Blue Ridge mountains. Would it grow there if sown? What is your idea of a farm rotation in that section? Why does clover always die out there the second year?"

Kentucky blue grass is native to a limestone soil and does not naturally come in on any other. In the sections of Virginia you refer to, grass has been

neglected and the soil run down to keep up a part of the land for tobacco. But blue grass will grow there and anywhere east of the mountains on a good clay loam soil, for I have grown as fine a blue grass sod in Piedmont, Virginia, as can be seen anywhere, and I have here at the Station farm in North Carolina, a blue grass sod twenty years old that is as dense as can be found in Kentucky. To grow blue grass in the South you must give it an occasional dressing of lime and must also give it an annual top-dressing of raw bone meal and muriate of potash mixed about six parts of the first to one of the latter. This treatment will make a dense and an annually improving sod. In a grazing section in Maryland this has been practiced for years and the capacity of the land for carrying cattle has continually increased. Clover dies out in the South from climatic effects except on very strong clay soil. But in the South, clover is not needed except the winter-growing annual crimson clover. You can do more in the South with cow peas than you can with clover anywhere, and can improve the land in far less time.

As to a rotation in the part of Virginia, you name, if you do not intend to grow tobacco—and one western farmer who has settled in southeast Virginia, wrote me that his neighbors said that he could not make a living farming there unless he raised tobacco, but he intends to show them otherwise and doubtless will—I would suggest the following: Starting with poor run down land, I would plant corn and fertilize it at first with a good complete fertilizer, though as a rule I do not think it will pay in the South to use a complete fertilizer on corn after you get the land into a good rotation. At last working of the corn, sow peas all among it. Cut the corn off at the ground and cure in shocks and then prepare the surface well with a Cutaway harrow, but do not replot, but keep the cut up pea vines on the surface. Then drill wheat with a disk drill. As soon as the wheat is harvested, break the land and give it a dressing of 300 lbs. per acre of a mixture five parts phosphate and one part muriate of potash and sow one bushel of peas per acre. Mow the peas for hay when the pods turn yellow, and then again use the Cutaway harrow to put the surface in fine order and sow wheat again. After this wheat is harvested, break and fertilize the land again and sow peas once more. Save these too for hay and make the surface fine with the Cutaway harrow and sow 15 lbs. per acre of crimson clover seed and one bushel of rye so that if the clover fails you will still have the rye as a winter cover. During the winter get out on this clover all the manure you make from the feeding of the stock that the roughage will enable you to keep, and when the clover blooms in spring turn all under for corn and repeat the rotation. By this rotation I believe that any of the lands

there can be brought up to 75 bushels of corn and 35 to 40 bushels of wheat per acre and you will be able to feed a lot of stock and make large quantities of manure. Get a piece of land set in grass for a permanent pasture and keep the grass good by top-dressing and an occasional liming so that you need not pasture any of your cultivated fields. Good farming will pay as well in Virginia as anywhere.

W. F. MASSEY.

HOW SHALL WE MAKE THE SOIL MORE PRODUCTIVE?

Editor Southern Planter:

While there are a great variety of soils, some rich and some poor, still nature has been quite liberal in storing even in our poorer soils a comparatively large amount of plant food, if chemical analyses are to be relied upon. For instance, in a comparatively poor soil the chemist tells us that in the first acre foot, that is the soil to a depth of 12 inches and a surface area of 66x660 feet, there are often several thousand pounds of potash. Yet, strange to say, potash-loving crops, such as tobacco, will not yield well on this soil unless supplied with considerable amounts of plant food in an artificial form.

This brings up for consideration several questions of vital concern to all persons interested in tillage operations. Why is it, if the chemist finds this food in the soil in quantity, that large crops are not obtained from the land? This is an old, old story, one that has been written and talked about for years, and still it is surprising how few of those who really till the soil understand that plant food may be in the soil in abundance, but unless in a soluble form, that is, dissolved in water, it will remain useless to the plant.

The first problem, therefore, that confronts the farmer who is blest with an abundance of poor land is to determine the best means by which he can render the plant food in his soil available; for while commercial fertilizers should be used under intelligent practice, the farmer can never hope to be successful and put all the plant food needed by the growing crops in the soil in an artificial form. The catechism of the farmer, therefore, should contain one commandment which should be constantly before his mind, first, last, and all the time; namely, tillage, more tillage, continuous tillage. Were the virtues of tillage fully appreciated in the South there would be less complaint of small crop yields and of hard times on the farm. If the farmer understood more fully that tillage simply means the setting free of more plant food, the stimulation of crop growth, the improvement of the soil's physical condition, and increasing its capacity for holding and storing mois-

ture, he would find greater pleasure in the cultivation of his crop and it would cease to be the drudgery which it is too often felt to be at the present time. It is not uncommon to hear certain good farmers criticized for the persistency with which they cultivate their soil, and it is the general belief, unfortunately, that too much cultivation is a waste of money and only results in a loss to the farmer. So long as the farmer is improving his soil, opening it up for the free circulation of air and of water, he is simply vitalizing it, increasing his stores of plant food and adding to the crop producing capacity of his soil. There is one great axiom, one fundamental principle of crop production which should never be forgotten, namely, that crop yield is in proportion, other things being equal, to the available supply of plant food contained in the soil.

All this is apparently an old story, and yet it is so new to thousands that they surely have no conception of the benefits of tillage or their practice would be radically changed. But there are some principles of soil cultivation which have been unfortunately overlooked which may, from certain view points, be new to many, and it is my desire to call special attention to these. For a century and more farmers have not been growing as deep feeding crops on their soils as they might have raised to their manifest advantage and to the soil's material improvement. For a century and more shallow plowing has been followed; as a result a hard pan has formed at a slight depth below the surface, and it is now practically impossible for the roots of the coarser feeding plants to strike deeply in the subsoil and find the adequate supplies of plant food which a wise Providence has seen fit to store there.

This brings up for consideration another phase of the subject which had better be discussed at this point. What is a man to do who is burdened with a farm depleted of fertility provided his means are small? First of all, concentration is one of the greatest principles of business. It is through the concentration of effort on a given industry that most of our amazing industrial plants have been developed. Therefore, it should be the first principle of practice with the farmer. Cultivate just as much land as you can cultivate to the best advantage; let the balance alone, nature will cover it up and take care of it and recuperation will set in. The process is slow, it is true, but it is efficient in the end, which is the true measure after all of success. But the poor farmer says, I have no credit nor money with which to purchase commercial fertilizer, and therefore how can I hope to improve my land. There is always a solution to the most vexing problem, and in this instance, it lies first in careful, deep, thorough tillage. Where the land is clayey in character use the subsoil plow.

If nothing better is available a bull-tongue will answer. Next, utilize some deep-rooting leguminous crop, such as the cow-pea, or the soy bean, or red clover, or the vetch. A fine seed bed with a good depth and well supplied with moisture will do more to insure a satisfactory crop and provide a nucleus for the rejuvenation of your soil than a lot of commercial fertilizer, even of a good grade, scattered indiscriminately over an inefficiently prepared seed bed.

These words represent an experience of more than ten years in a study of the soil problem as it confronts the small farmer of the South to-day. It is apparent to all thinking men that the first thing necessary to improve the soil and make it productive is to increase the store of plant food. Therefore, why should it be necessary to suggest the practice outlined above? Why should it be necessary to discuss this subject over and over again when the solution is so apparently self-evident? However, practice and custom are two very curious things and it is extremely difficult to overcome either one, and so the small farmer who is in distress very foolishly concludes that he cannot help himself, because as he so frequently writes: "I have no funds with which to buy commercial fertilizers, nor have I stores of farmyard manure which I am sure you will recommend." This is the most pathetic kind of correspondence that comes to my attention. It is the hardest to deal with because of the prejudice and disbelief which form so large a part of the make-up of many who are in the condition herein portrayed.

Now, the solution of this problem lies in the education of the farmer to the belief that he can help himself. Once get him to a true appreciation of this fact and the balance will be easy, but so long as he remains in the slough of despondency, nothing can be done. A little reasoning, however, and a little consideration of the problem shows that the situation so discouraging to so many and so often looked upon as a curse and blight upon our agriculture is not a hopeless one. All that is needed is a persistent adherence to certain well-defined principles and the solution of this problem of maintaining soil fertility will be a fixed reality.

There is no place where the farmer cannot use tillage as his first aid and deep-rooting leguminous crops as the second, so it makes no difference to him whether farmyard manure or commercial fertilizers are available or not. He can start, make a success, and follow it up by his own efforts. This article is not intended to convey the idea that commercial fertilizers are not necessary or to be used often and judiciously, but one must have capital to do these things, and it is the farmer who is without capital, and sometimes I fear without hope, that these facts

are intended to benefit, and I hope even inspire. Of course, farmyard manure is a most valuable adjunct, and strange to say, there are thousands of farmers who keep a number of animals each year and yet no effort is made to save a little of the excreta and utilize it as a top dressing on some of the growing crops. It is simply marvelous what a man can accomplish if he sets his mind resolutely to a given purpose. Only last summer several pieces of ground came under my observation, and I saw the marked benefit of using on a virtually barren piece of soil a compost consisting of leaves and grass collected by industrious farmers. Is there any reason why this example should not be emulated with success. It has been often said that there is no royal road to learning, and there is certainly no royal road by which we can reclaim our barren and exhausted soils. Good common sense, honest, energetic effort, and the utilization of the means which are found on every farm, no matter how remote from markets or the haunts of man, will solve this problem—the greatest, the most vexing and perplexing with which our farmers have to deal. By the use of deep feeding and rooting plants the soil can be aerated, the rain provided with channels by which it can descend into the ground, plant food brought close to the surface and stored for other crops, the inexhaustible supplies of food in the subsoil rendered a part of the farmer's productive laboratory, and all this for the effort, without money and without price.

Then, think how wonderfully the southern farmer has been favored. Why not grow two crops a year. In a large part of the United States only one crop can be grown: here in the South two can be raised just as well as not if the farmer is industrious and aggressive as he should be. Why not grow a crop of wheat and raise a crop of clover the next year suitable for grazing or hay making, and a wonderful soil improver. But you say, clover will not grow. No, it will not grow under the conditions to which you have subjected it, but if you will confine your efforts to a smaller piece of land, make it as it should be, make it as it was once, and it will grow red clover just as well as it ever did. Now then, where two crops a year are grown, do not be too greedy: leave one on the soil for enrichment and improvement; utilize the other as a money-making crop. You will increase the yield of your soil in a few years five-fold, even ten-fold, and do you say you cannot afford to make such an investment. Why not put it the other way—who can afford to ignore this proposition? The answer is, no one.

There are some principles which we have long ignored on the farm; we must come to appreciate them more fully in the future than we have done in the past. The business man who contemplates making money knows that he must make an investment

and wait through many years for his returns. A farmer thinks that a crop plowed under to enrich his soil is a waste of good material. Not so. If on a stock farm this might be true, but on thousands of farms in the South where no stock is kept and where the crop production is of such character that clean culture is a necessity and the draft on the soil by reason of the crop sold very great, plowing under green crops must of necessity become one of our agricultural axioms. You cannot take something from nothing and have something left. Feed your land; treat it generously. It is like a good horse or a faithful dog. It will return you bountiful crops; it will make your heart glad. Plowing under one of two crops to improve the soil, even of a leguminous nature, is not an extravagance; it is the acme of wisdom. Some may characterize it as folly, but they are ignorant, prejudiced and do not understand the great principles which must actuate the farmer who has this poor soil problem to solve. Store food in the soil abundantly. You can do it poor though you may be; humble though your efforts may be in their inception. You can accomplish wonders in the course of a few years. Confine your efforts to small areas; be systematic and persistent; utilize every vestige of compost and farmyard manure you can obtain; remember the virtue of tillage; remember the importance of deep-feeding leguminous crops and feed the land generously. Then, as soon as you can accumulate even a small amount of money, invest in some phosphoric acid, in some muriate of potash, and in some lime. The leguminous crops will give you all the nitrogen and vegetable matter you need, and with these three essential elements to balance up your soil food supply, to sweeten it and put it in ideal condition for crop production, the vexations problems with which you have been contending for years and years without success will disappear, and you will eventually come into your own—a fertile soil, a profitable homestead, and joy and pleasure forever.

ANDREW M. SOULE,
Dean and Director.

Virginia Experiment Station.

A WELL BALANCED RATION AS NECESSARY TO PLANTS AS ANIMALS.

Editor Southern Planter:

A correspondent writes from Mississippi that he has tried a great many varieties of cotton, but that they all go too much to weed on his land, and asks us to give him the name of some sort that will make fruit instead of stalk. His land is rich river bottom, and they never use any fertilizer.

Now this is right where a great many people make a very serious mistake; they imagine that because their land is apparently rich, they would be wasting their money to purchase fertilizer to apply on it; they judge the land to be rich because the plant grows luxuriantly, and when it fails to fruit they lay the blame on the variety instead of where it should be, on the land. The real fact of the matter is, that on this rich land, commercial fertilizer will pay better than anywhere else, when properly applied, for it will balance the plant food already in the soil, and force the plant to make a symmetrical growth, instead of a one-sided growth, as shown by our friend's letter.

We must not lose sight of the fact that plants require all three of the principal elements of plant food, ammonia, phosphoric acid, and potash, in the right proportions, in order to make a perfect development, and that an excess or lack of any one or more of these elements will lead to an imperfect and one-sided development of the plant. We must remember that ammonia produces a growth of leaf and stalk; that phosphoric acid produces fruit and seed; and that potash makes the plant hardy, giving strength to the stalk, sweetness and color to the fruit, and when it comes to cotton, has more to do with producing lint than any other element. Now it is a known fact that where one of these elements—ammonia, phosphoric acid or potash—is present in insufficient quantity the plant will try to get along without it the best it can, just as the horse will try to live and thrive on hay, if given little or no grain; as a rule, however, the horse will not be able to do as much work on hay alone as he will when fed a properly balanced grain ration and it is the same with the plant. Moreover, if one element of plant food is in excess in the soil the plant will take up more of this element than is good for its perfect development, and this was the trouble with our friend's cotton on that rich bottom land. The soil contained a great deal of ammonia, and the cotton absorbed more than was good for it; this resulted in the one-sided development, and the cotton going to weed instead of fruit. He states that his cotton was taller than his head, and so thick that the pickers could hardly get through between the rows, and yet it would not make much more than a half bale per acre, and he asked for a variety that would make fruit on this land.

It is possible that an early variety like King's would make some more cotton than the varieties he has tried, but it is doubtful if it would be very much better. If the plant food in the soil was properly balanced, however, by the application of a liberal amount of phosphoric acid and potash, any early prolific variety would make an enormous crop. It

would take at least 1,000 lbs. of acid and potash per acre, analyzing about 10 % phosphoric and 4% potash to balance the large amount of ammonia already in this land, and force the cotton plant to make fruit instead of so much stalk; but these are the cheapest elements of plant food, and results would more than justify the use of this amount. You see the most costly element, ammonia, worth three times as much per pound as either phosphoric acid or potash, is already present in this land, and this is the reason it will pay better to fertilize rich land than poor land. On poor land you must apply the expensive ammonia also, but here we use the phosphoric acid and potash to balance the ammonia already present. It is true that it might be advisable to use a little nitrate of soda with the seed, about 50 lbs. per acre, in order to give the plants a good start, but that is all that would be necessary.

Did you ever notice how much more fruit cotton will put on on red clay land, compared to the size of the stalk, than it will on grey land or bottom land? We are forced to the conclusion that a more ample supply of potash on these lands forces the plant to make fruit just as the excess of ammonia on our friend's bottom land forced it to make stalk. We need stalk to carry the fruit, however, as well as bolls on the stalk. In other words, we need a perfectly developed plant to make the largest yield, and to get this we must feed it with an evenly balanced ration of plant food in the soil, in which ammonia, potash and phosphoric acid will be represented in the right proportions to produce the largest amount of fruit.

This principle will apply also to all other crops just the same as it does to cotton, and it is the business of the farmer to know: First, what his crop requires to bring out its fullest development; second, what elements of plant food his soil contains, and in what proportions; and third, how to balance his fertilizer so as to supply the deficiency in his soil, and give his crop an evenly balanced ration, one that will bring out the points he wishes to bring out. To do this intelligently, one must study and experiment. Think a little more. Use your head as well as your heels. The time put in along this line of scientific investigation will pay you one hundred times better than anything else you can do.

F. J. MERRIAM.

SELECTING CORN.

By Andrew M. Soule, Dean of the College of Agriculture and Director of the Va. Expt. Station.

Corn yields readily to selection and the importance of selecting and improving varieties for local condi-

tions has already been dwelt on at some length. The means by which selection can best be pursued may therefore be discussed with propriety, though first it will be proper to show some benefits that may flow from selection. The financial side of selection will first be touched on because that directly affects the pocket of the farmer. If the acreage of corn in Virginia could be increased by five bushels, it would add to the yield 9,114,840 bushels, which at 50 cents a bushel would be \$4,557,420. If the yield were increased by 10 bushels it would add 18,229,668 bushels to the crop, increasing it practically by one-third, and adding \$9,114,984 to the revenue of the farmers from the same area of land, and when it is considered that this vast increase would result simply from the adoption and use of better varieties and seed, through systematic selection, the importance of this question becomes apparent to all. When it is recalled that this great increase could be effected without expending much more time, labor or fertilizer than is now used, the incentive to do so is increased many fold. It is a well-known fact that the yield of corn can be increased from five to ten bushels per acre by careful attention to the question of selection, for figures introduced later on in this argument show that Virginia soils will yield abundantly, in fact, surprising crops when well handled.

Next in importance to strict selection is the necessity of having every stalk on the land produce at least one fair-sized ear unless one of the prolific varieties of corn is being utilized. If corn is planted in hills 40 inches apart each way, there would be 4,000 hills per acre, and allowing two stalks per hill, 8,000 stalks. If every one of these stalks yields one ear and 100 ears make a bushel, the yield would be 80 bushels per acre. Suppose, however, that 50 bushels is the actual yield obtained; it is apparent that there are 3,000 barren stalks per acre; if 40 bushels are obtained, 4,000 barren stalks; if 20 bushels are obtained, 6,000 barren stalks. The average yield of corn in the State would indicate that there are as many as 6,000 barren stalks. This we know not to be the case, because many farmers raise as high as 100 bushels per acre and it is the general average that brings the yield down so low.

As a matter of fact, however, there are many barren stalks of corn even in the best fields. The number would be a surprise were the owner to count them carefully, and to be convinced of the truth of this statement, it will pay him to do so. These barren stalks are simply like parasites or undesirable organisms which cause disease in the body. They sap the strength from the soil and take away from its crop-yielding capacity. They are worse than useless, for unfortunately they tassel and hence yield pollen which is carried by the wind to silks of pro-

ductive plants. Thus, to allow barren stalks to fructify in the field simply means to weaken the hereditary yielding power of the variety of corn. This process repeated year after year causes the yield to decrease, though the matter is easily within the control of the farmer, for by passing through the field when the plants are beginning to silk and tassell, it is a simple matter to determine which stalks will be infertile. These should be topped so as to prevent the pollen from reaching the silks of productive stalks. In this way the yield per acre can be increased considerably, and it is certainly quite possible to secure a variety of corn, as investigations have shown, in which the stalks are practically all productive.

Sometimes sterility may be due to a lack of phosphoric acid in the soil, as its chief function is to assist in the production of grain, but, as a rule, barren stalks are found in every corn field which are simply there because of the inherent hereditary traits of the variety. These must and should be destroyed and it will certainly pay every farmer to give attention to this important matter and the time involved will not amount to much. In experiments made by the writer some varieties of corn have yielded from 8,000 stalks, 9,500 ears, while other varieties have only produced 4,150 ears. These differences in yield are sometimes due to placing varieties on types of soils to which they were not adapted, and then the varieties should not be blamed. For example, a river bottom type of corn planted on uplands yielded only 6,600 ears of medium quality from 8,000 stalks, whereas, when grown under favorable conditions each stalk produced a large ear, so that 100 ears would make more than one bushel. This matter of destroying barren stalks cannot be emphasized too strongly, and is one of those fundamental principles of selection which must be realized by the farmer and practiced before he can hope for improvement.

If seed corn is to be selected with success the work must be undertaken in a systematic manner. Selection of large ears at the crib is of course better than no selection at all, but even this method cannot be regarded with much favor for there is no telling what type of stalk the ear grew on, whether it was fertilized from a barren stalk, or whether the type of parent will be satisfactory. Selection to be successful must commence with the individual plant and the work must be done in the field in order that the right type of ear shall be chosen and in order that the ear chosen, from all outward appearances at least, have the qualities which it is desired to perpetuate. It is possible to influence a variety of corn in a comparatively short time, as the plant yields to selection remarkably well. A definite idea must be in mind before selection is undertaken and what may suit

one may not be at all suitable to another. For instance, if one were selecting corn for river bottoms, a larger ear and stalk could be permitted than on thinner uplands, though it is undesirable in any case to select for very large ears and stalks. A better method would be to select a variety of corn having a fair amount of leaf surface unless intended for silage purposes, when a large amount of leaf would be desired. Care should be taken to select from varieties that do not show a large amount of suckers, as these simply draw on the food supply of the soil without increasing the yield, and as they are low to the ground, they can seldom be harvested. A short, stout stalk is preferable to a large, coarse one, and a very tall variety should be avoided as it is hard to harvest and breaks down badly as well. The large yields of corn obtained in the north are due essentially to one thing, namely, the closeness of planting, and this is a matter which should be carefully borne in mind in making selections. As corn tends to grow larger and coarser the further south we go, this is a matter that should receive primary attention, to select from stalks of medium size and to follow this up so systematically that the type of corn can be kept uniform and suited to the condition of soil and climate under which it is grown.

The relation of closeness of planting to yield is quite remarkable and in experiments made by the writer, the following results were obtained. Cocke's Prolific corn planted in checks 30 inches apart, yielded 54.11 bushels per acre; in checks 36 inches apart, 51.27 bushels; in checks 42 inches apart, 51.45 bushels; in checks 48 inches apart, 50.30 bushels; in checks 54 inches apart, 42.49 bushels; in checks 60 inches apart, 32.43 bushels per acre. There is a tendency to too wide planting in the South, due to the desire to grow a large stalk and a large ear. A large ear and a large stalk do not insure the largest yield, as this experiment, which is amply supported by many others, demonstrates. Too wide planting decreases the yield; too close planting is not desirable because the ears do not develop well. For varieties, such as Cocke's Prolific, grown on uplands of moderate fertility, 42 inches or $3\frac{1}{2}$ feet is a very satisfactory distance. Many farmers, however, insist on planting their corn in checks from 4 to 5 feet, and thus the yield is materially reduced.

(To be continued).

YIELD OF COW PEAS.

Mr. Henry Warden, of Fredericksburg, writes us that one of his fields seeded with New Era cow peas produced a ton of hay and 16 15-100 bushels of peas per acre. Another field seeded with Whip-poor-ill cow peas produced 1.3 tons of hay and about 10 bushels of peas per acre.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The planting of cabbages for the early spring crop should if not already completed be pushed to completion as soon as possible or frost may prevent the setting of the plants until February, when much loss may result in marketing the crop from being too late to catch the best market. Whilst it is not desirable that the plants should make too much growth in the early winter as this makes them too tender to stand frost, yet they should get hold of the land and just start before hard weather sets in. See that the land is finely prepared and made rich. We gave advice as to the fertilizer to use in our October issue.

In Tidewater Virginia and Eastern North and South Carolina and also in the eastern part of Southside Virginia, Irish potatoes may be planted this month for a very early crop. This planting requires however, to be done in a very special way in order to be a success. The rows must be plowed out very deep by running the plow at least twice to each row. Then the soil in the bottom of the rows must be broken fine and have a heavy dressing of a good potato fertilizer rich in potash, well mixed with the soil. The sets should then be planted and be covered lightly with soil and then have a heavy coating of barn yard manure placed on the top of the soil and upon this furrows should be plowed from each side so as to thoroughly cover the manure and make a ridge over the sets. In the early spring, as soon as the weather becomes mild, harrow this ridge down and the potatoes will come through. If they should appear too early plow a little soil onto them as soon as they break through. We have reports from a number of parties who have made excellent very early crops in this way.

In this issue will be found an article on the production of the winter lettuce crop, by Prof. Massey, to which we invite attention. We have had several enquirers recently on this subject.

Clean up all trash and rubbish from the garden and truck patches and plow the land and give a dressing of lime at the rate of 25 bushels to the acre and harrow it lightly.

THE VIRGINIA STATE HORTICULTURAL SOCIETY.

The Hon. S. L. Lupton, the Secretary of this Society writes us that the Society will hold its annual meeting in Richmond on January 10th next and that it extends a hearty invitation to all members and others interested in the work of the society to be present. He desires us also to say that in formulating the rules governing the competition for the Emerson Challenge Cup, Winesap apples were inadvertently omitted from the list of apples which might be shown in this competition. He desires it understood that parties having Winesaps to exhibit may enter the competition.

WINTER LETTUCE GROWING IN THE SOUTH.

Last December I visited one of the largest establishments near the city of New Bern. The firm owning this establishment formerly cultivated 500 acres in truck crops in the open ground, but the scarcity of labor compelled them to reduce the area in the open ground and to concentrate their efforts on a more limited area in frames and under irrigation. At the time of my visit they had about 16 acres over which ran sprinkling pipes. These are elevated on posts high enough to work horses under. One large main runs through the center of the plat, and from it the sprinkling pipes of a smaller size branch at right angles 40 feet apart, and each line waters 20 feet each way. This watering arrangement, through which the water is forced direct by a steam pump, not only serves the purpose of irrigation in dry weather, but is also a protection in the early spring from late frosts for when frosty nights threaten, the water can be turned on and the sprinklers kept at work all the latter part of the night to wash off frost as fast as it forms.

They have also six acres in frames made eleven feet wide, which are worked by horse power by taking out the ends and ridge poles. These frames are covered with cloth, and in winter have a one-inch steam pipe running through over head under the cloth merely to keep out frost, for a very high temperature is not needed, and in fact is harmful to the winter crops.

In the inception of winter-lettuce growing, it was the practice to plant a crop in the early fall to head about the last of November and then to replant for the late winter and spring crop. But ex-

perience soon showed that the immediate replanting of the same crop let to a great deal of stem rot, and this firm adopted a different method. They plant part of the frames for the fall crop, and as soon as that is cut out, the frames are manured and fertilized (for they use cow manure very largely, and commercial fertilizers in addition, since it has been found that the best lettuce requires both), and the frames are planted with early beets. These come off early in spring, and the frames are then planted with cucumbers. The cucumbers are shipped north as long as the price warrants, and all that are made later are gathered when of small size and put into great tanks in brine. There are two of these tanks, holding 50 barrels each. These are later sold to the picklers. The frames are again cleared out in late summer, and the second crop of potatoes is planted in them from seed of the early crop grown elsewhere. These are cultivated by horse power, and are dug about the last of November, and these frames then get a heavy manuring and fertilizing, and are planted with lettuce for the late winter and early spring crop while the section that grew this crop the season before comes in after the cucumbers for the early fall crop.

In his way there is some crop growing in the frames

the whole year through. When I was at this place, they had just finished cutting the lettuce from an acre and a quarter of frames, and I was told that \$2,250 worth had been sold from the $1\frac{1}{4}$ acres, and the remainder of the frames were just set in lettuce for the later crop. In setting the lettuce in the frames, they use a wheel hand-plow to throw up slight ridges about 10 inches apart, the length of the frames. These ridges are to prevent the danger of setting the plants too deep, since it has been found that a plant set too deep will not head well. The soil in the frames had been previously well filled with rotted cow manure, for the firm keeps a herd of 150 cows, and runs milk wagons in the city. When the plants have well taken hold of the soil, a high-grade fertilizer rich in ammonia and potash is sprinkled, at the rate of a ton per acre, between the plants, and the ridges are then leveled and the soil well worked. With this heavy manuring the growth is wonderfully rapid. There will only be need for the steam six or eight nights during the winter, for a high temperature is worse than one down near the frost point, making the lettuce tender and flabby and injuring its shipping qualities.

W. F. MASSEY.



HARRISON'S NURSERIES.

Recently we had the pleasure of visiting and inspecting the great nurseries of Messrs. J. G. Harrison's & Sons, located at Berlin, on the eastern shore of Maryland. We consider ourselves fortunate in having been able to take our own time in driving over and inspecting 1,200 acres of the finest nursery stock we have ever seen. From the magnificent equipment and extent of this establishment, one would think that this firm had been in business at least a

half a century. But not so. It has been only 17 years since Mr. J. G. Harrison, the senior member of the firm budded 2,000 peach trees as an experiment. That their business has grown by such leaps and bounds, is almost beyond comprehension. But it is a fact nevertheless. When one examines carefully their methods of doing business, planting and budding stock, handling orders, etc., the wonder ceases, as herein lies the secret of their success.

This budding of peaches is a specialty with them. The illustration above shows the process; the man at

the left is inserting the bud and the one on the right is carefully wrapping the tree with raffia. This is from an actual photograph showing a section of 200 acres containing several million peach trees.

Mr. Orlando Harrison, the business manager of the firm directs us to say that this is a standing invitation for any of our readers to visit the nurseries at any time, whether they wish to buy stock or not. Visitors will be shown over the nurseries, with pleasure. If you will take our word for it you will never regret taking the trip at once.

B. M. S.

MAKE CUTTINGS NOW.

Few people realize how simple a matter it is to propagate one's own grape vines, currants, gooseberries and most ornamental shrubs. If the work is properly done these plants may be readily propagated by means of cuttings made late in autumn after the leaves are off of the plants but preferably before cold weather comes on. Only well ripened mature wood that has grown during the preceding summer should be selected for the purpose, all soft or immature parts being discarded. The cuttings themselves should be made six to ten inches long and the base of each should be cut squarely just below a bud so the bud is retained at the lower end. They should be tied up in bundles of convenient size, say, one hundred in a bundle, their butts, or basal ends all one way well shaken down so as to stand level on a flat table. They may then, be packed in fresh, moist sawdust and be kept through the winter in a cellar or callus pit.

Upon the approach of spring, as early as the soil can be worked and before the buds have begun to grow on them, they should be planted out in good garden soil. The rows should be about four feet apart, to admit of easy cultivation, and the cuttings should be set very firmly in the soil, so as to leave no air spaces about them, and set deep enough so only the uppermost bud is above the ground. They should then be given clean cultivation and hoed to keep down all weeds during the summer, when usually an excellent growth of plants will be secured.

Currants, gooseberries, the Marianna and Golden Beauty plums, some varieties of quinces, the barberry, spirea, mockorange, privet most varieties of shrubs, willows, poplars and some other varieties of forest trees, root readily from cuttings handled in this manner.

J. C. WHITTEN,
Professor of Horticulture,
Missouri Agricultural College.

REJECT DISEASED NURSERY STOCK.

Insects and diseases of nursery stock of a seriously injurious nature have become so widely disseminated that persons desiring to plant only a few trees, as well as fruit growers in general, would do well to inspect all nursery stock carefully before accepting it.

Considering 50 apple trees per acre, as worth 10 cents each, \$5.00; the land on which they are planted, \$25.00 per acre; planting and care \$7.50 per acre each year; and we foot up for ten years, \$105.00. Suppose one should use diseased nursery stock, and the orchard become almost entirely worthless at the end of the tenth year. One then has only the value of the land (\$25.0) to show for an outlay of \$105.00, besides not having the land for use during this period. It will be a good business proposition to start with healthy nursery stock.

The main troubles of nursery stock are the San Jose scale and the Crown gall of apple. The Crown gall is discussed in bulletin No. 140 of the Virginia Experiment Station, and a discussion of this and other troubles of nursery stock appears in Circular No. 45 of this office, both of which may be obtained by addressing Prof. Andrew M. Soule or the undersigned. While a close supervision is kept over nursery stock sold in this State, much more will be accomplished if the fruit growers themselves will inspect carefully all the stock purchased, and call the attention of the State Entomologist to any troubles observed.

J. L. PHILLIPS,
Entomologist.

Experiment Station, Blacksburg, Pa.

THE QUESTION OF FERTILITY OF LAND.

Mr. Lang, of Toledo, O., writes us in reference to the point of fertility of yellow clay raised by Mr. Karns in our last issue. It says that the Park Commissioners of that city removed all the soil (about 7 inches of sand loam) and 2 feet of the subsoil from a piece of poor land, worn out soil, to fill in for a road. They then sowed oats on the land (and in his opinion did the work very poorly) and sowed Timothy and clover, using no manure. The oats were a very poor crop but now they have a fair stand of red clover. This would seem to show that there was fertility in the clay rendered available by the preparation for the oat crop and the humus added by the oats.

Live Stock and Dairy.

ABORTION IN COWS.

Editor Southern Planters

Abortion has never been common in this part of the country, probably because farmers do not keep such large numbers of cows, as is common in regions where dairying is the principal business. It is seldom we hear of a cow that has "slipped her calf."

Once I had two cows abort in the stable the same night and I have no doubt the cause was from feeding the stuff blown from wheat, by an old smut machine in a grist mill owned by myself. In these machines the wheat was subjected to a scouring operation, and then to a strong current of air which blew out the chaff, dust, shrunken kernels of wheat, and chaff. It was a product which cost nothing, and I had fed it more or less for several years, always with good results. Cattle ate it greedily, and when fed in moderate quantities it had always increased the flow of milk. Previous to the abortions I had been feeding our cows more of the stuff than usual, and I think the wheat of that year's growth was more smutty than common, which may have been the cause of the abortions. I was feeding the stuff very liberally so that the cows began to leave some in their mangers.

Smut in wheat is usually the exact shape of a kernel of wheat, or it is rather the outside shell of a grain of wheat full of black dust inside. These smut grains generally get broken in the machine and the dust is driven out, but being light would be driven out anyhow, whether broken or not.

How much longer the cows would have carried their calves, I do not know—probably two or three months as they were still giving milk. The calves when expelled were small, but covered with hair. The value of the cows was greatly injured for that season, they not giving more than half their usual quantity of milk. There were ten other pregnant cows in the stable, but these two were the only ones that lost their calves. They were served by the bull the first time they came in heat which was about three months from their miscarriage and carried their calves the full time, were successful in giving birth to good calves, and yielded milk as plentifully as they had ever done. I never fed any more of the smut, and they never aborted again. Afterwards I had a young cow abort in the barnyard. The calf was not larger than a common cat, and not mature enough to have any hair. I knew of no cause for the abortion unless some of the other cows cornered

her and pushed her down, but there were no marks of violence on her body.

Among the numerous causes for abortion in cows Dr. Law gives the following: "Blows on the abdomen; falls; riding by other animals in heat; tympanitis, from wet; frosted, or musty fodder; inflammation of the bowels; diarrhoea; poisoning by irritants taken with the food; stalls too much inclined backward; over feeding; hot, damp, stables; breeding at too early an age; proximity to, or contact with slaughter houses, or dead, and decomposing animal matter—especially the abortion discharges of other animals; drinking putrid or ice water; feeding on ergoted grasses, or smutty wheat, or corn; and finally the presence in the passages of a microscopic vegetable parasite (*leptothrix vaginalis*) which is easily transferred from one animal to another so as to produce abortion."

As regards symptoms, Dr. Law says: "In the early stages of gestation, abortion often takes place without any warning; later the preliminary signs may be those of an ordinary parturition, or in other cases a whitish, muco-purulent discharge may take place from the vulva for some time before abortion occurs. For preventive treatment, Dr. Law says attention should be given to secure a diet which will obviate indigestion; to eradicate from hay fields all vitiating plants; to let the system be somewhat developed before breeding, and not milk too heavily the first year; to give pure air and water, and wholesome buildings, and finally to use anti-septics on the discharges, and keep all sound animals apart from the diseased or their products. When the whitish muco purulent discharge, and other promoting symptoms appear, he says, laudanum may be given in large, and repeated doses to quiet the system, and keep the tendencies in check.

Dr. Dadd says: "The common causes of abortion are the respiration and ultimate absorption of emanations from putrid animals remains; miasmata; over-feeding; derangement of the stomach, filthy, stagnant water, violent exercise, jumping dikes, or hedges; sudden fright and blows or bruises."

For treatment Dr. Dadd says: "When a cow has slipped her foetus the quantity of food usually given should be lessened, and give the following drink every night for a week—Valerian (herb) 1 oz; powdered skunk cabbage, 1 teaspoonful."

It is said a farm in England had been given up by tenants three successive times in consequence of the loss the owners sustained by abortion of their

cows. At length the fourth tenant after suffering considerable losses by abortion of his cows, suspected that the water of his ponds which was extremely filthy might be the cause of the mischief. He therefore dug three wells on the farm, and having fenced around his ponds to prevent the cattle from drinking there, caused them to be supplied with well water, and from this time on the evil was remedied, and the quality of the butter and cheese made on this farm was greatly improved.

Dr. White, V. S., says: In 1872 all the cows of a farmer in D'Eruse, Picardy, miscarried at about the fourth and fifth month. The water they had been drinking was extremely bad, and they had been kept on oat, wheat and ryestraw, not containing sufficient nourishment, and these were no doubt, the causes of the miscarriages.

A farmer at Chariton, in France, out of a dairy of 28 cows had 16 slip their calves at different periods of gestation. They had been pastured in a muddy place which was flooded by the Seine.

In 1789 all the cows in a village near Nantes, aborted. The pastures for a time had been completely inundated which made the grass bad in smell, and deficient in nutritive properties.

Mouatt says: "It is supposed that the sight of a slipped calf, or the smell of putrid animal substances are apt to produce warping."

J. W. INGHAM.

Whilst abortion may and does almost always occur now and again, even in well managed herds of cows and frequently no cause can be assigned for these cases, yet with care, no serious outbreak of the trouble need be apprehended if care is taken at once. Remove the aborted cow to separate quarters, away from the other cows and all matter which has been in contact with the aborted cow, with the aborted foetus and discharges should be at once burnt and a good disinfectant be freely used in the stable, where the cow aborted. If these precautions be not adopted contagious abortion may be started in the herd, and this may be come a very serious trouble, entailing great loss. We have known this trouble to persist in a herd for several years and not to be stopped until the whole herd had been removed to another farm at some distance. This contagious form of the disease may be conveyed by the bull and therefore great care should be exercised not to allow service on an aborted cow for a long time after the abortion and until all traces of the abortion have ceased and the cow has been injected with disinfectant solutions to destroy the contagious germs. A good disinfectant of the stable may be made by dissolving 5 ounces of Sulphate of Copper (bluestone) in a gallon of water and with this wash all the stalls, gutter and floor. For a disinfectant injection for the vulva and the parts around dissolve 1 dram of Corrosive Sublimite,

1 ounce of alcohol and 1 ounce of glycerine in a gallon of water. Inject some of this solution into the vulva and wash the parts around and the tail every day with it for a week or more. This solution is very poisonous and therefore should be kept securely locked up when not in use.. Ed.

COMPARISON OF THE JERSEYS AND HOLSTEINS AT THE ST. LOUIS FAIR TEST.

Having completed the records of the leading fifteen animals in the Jersey herd, and there having been but fifteen cows in the Holstein-Friesian herd, it may be instructive to compare their respective productions at this point. The fifteen Jerseys produced 78,093.4 lbs. milk, against 96,175.3 lbs milk in the case of the Holsteins. The Jersey milk contained 3,721.90 lbs. fat, the Holstein milk but 3,298.44 lbs. fat. The estimated Jersey butter amounted to 4,384 lbs., the Holstein butter to 3,817 lbs. The milk of the Jerseys contained 6,856.185 lbs. solids not fat, the milk of the Holsteins 7,630.913 lbs. It cost \$441.261 to feed the Jerseys, and \$515.70 to feed the Holsteins. As butter-producers the Jerseys returned a net profit of \$654.736, against \$438.55 net profit for the Holsteins. As milk-producers the Jerseys returned a net profit of \$880.996, against \$702.757 in the case of the Holsteins. The average percentage of solids not fat in the Jersey milk was 8.77; in the Holstein milk it was 7.9. The total solids formed 13.5 per cent. of the Jersey milk and 11.3 per cent. of the Holstein milk. It required 17 4-5 lbs. of the milk of the Jerseys per pound of butter, against nearly 25 1-5 lbs. of the milk of the Holsteins. The Jersey butter cost a little over 10c. per pound in feed; the Holstein butter cost over 12½c. per pound in feed.

The averages per cow were as follows:

	Jerseys.	Holsteins.
Milk	5206.2 lbs.	6411.7 lbs.
Fat	248.1 lbs.	219.89 lbs.
Butter	292.26 lbs.	254.46 lbs.
Solids not fat.....	457.079 lbs.	508.727 lbs.
Cost of feed.....	\$29.417	\$34.38
Net profit, Class A.....	43.649	29.23
Net profit, Class B.....	58.733	46.85

The averages per cow per day were as follows:

	Jerseys.	Holsteins.
Milk	43.38 lbs.	53.4 lbs.
Fat	2.067 lbs.	1.832 lbs.
Butter	2.435 lbs.	2.12 lbs.
Solids not fat.....	3.809 lbs.	4.239 lbs.
Cost of feed.....	24.5c.	28.6c.
Net profit, Class A.....	36.37c.	24 1-3c.
Net profit, Class B.....	48.94c.	39c.

R. M. Gow.

FEEDING HOGS.

In an address before the New York farmers, Mr. John R. Gentry, of Overton Hall Farm, Nashville, Tenn., one of our highest authorities on swine, took occasion to commend unreservedly the practice of scalding feed, about which, as readers know, some difference of opinion has prevailed. He said:

"In that I am directly opposed to the agricultural stations. They claim to prove that by actual experiment the assimilative qualities of the feed are reduced by doing it, but I know from personal experience that I can get more results out of 1000 pounds of feed scalded and fed to my hogs, in pounds, dollars and pence, than I can out of 1500 fed in the raw state. This is practical experience. Mr. Hood, of Massachusetts, who won in the show ring at St. Louis, Mr. Henderson, Mr. Hudson—they all feed cooked feed. The Duchess of Devonshire feeds it. Take every breeder and every man who is winning, with the exception of one (and he is feeding a ration of corn and milk), and you will find that they feed the cooked feed and are winning with it. I think the feeding of cooked feed increases the digestive powers. Some 12 or 13 years ago, when I first began to use it, I had, on my own farm, in Kentucky, a lot of wheat that I could not dispose of; that is, I wouldn't take the price. I fed it to the pigs; it passed through them; I ground it up and fed it, and it seemed to germinate and grow in them. I began to cook it then, and I didn't have any more germinating or growing—except that the pigs began to grow—and I saw it was the thing for me, and I stuck to it."

CATTLE QUARANTINE.

Commonwealth of Virginia, office of State Veterinarian, Virginia Polytechnic Institute.

Notice to Managers and Agents of Railroads and Transportation Companies of Virginia, Stockmen and Others:

On, and after the above date (Nov. 6, 1905) cattle from below the State and Federal quarantine throughout the State of Virginia against Texas cattle fever, may be moved to the non-quarantined portion of the said State of Virginia, provided said cattle have first been inspected by an inspector authorized by the State authorities to do this special inspecting, and that this inspector has given to the owner of said cattle a written certificate to the effect that said cattle are free from infection-cattle ticks. Appointment of inspectors for this work is as follows:

When the Board of Supervisors of a county wishes to have an inspector appointed for that county, or

vicinity or district, for the above purpose, said inspector to be paid for this work; either by the county or by the owner of the cattle, then the Chairman of the Board of Supervisors must send the name and recommendation of this man to the State Veterinarian's office at Blacksburg, Va., and upon the receipt of such recommendation the State Veterinarian will at once appoint the individual suggested by the Supervisors, and will forward to him such directions and instructions as he may need to carry on the work. This order will stand good until further notice from this office.

J. G. FERNEYHOUGH,
State Veterinarian.

A TONIC FOR AND PREVENTIVE OF DISEASE IN HOGS.

We have recently had a number of enquiries for help from hog feeders who are losing hogs from disease, and from others who have difficulty in keeping their hogs hearty and doing well. We strongly advise the use of the following tonic and disease preventing mixture, at frequent intervals by all hog keepers:

Wood charcoal, 1 pound;
Sulphur, 1 pound;
Sodium chloride, 2 pounds;
Sodium bicarbonate, 2 pounds;
Sodium hyposulphite, 2 pounds;
Sodium sulphate, 1 pound;
Antimony sulphide, 1 pound.

Pulverize and thoroughly mix. The dose is a large tablespoonful for each 200 pounds weight of hogs to be treated, given once a day. The hogs will eat this mixed in their food, unless very ill, when it should be poured into them, mixed in water.

THE WORLD'S BUTTER RECORD.

Yeksa Sunbeam, a Guernsey cow, the property of Mr. Riethrock, of Athens, Wis., has won the proud position of the world's greatest butter producer a record which has been made under the supervision of an Advanced Register and Agricultural Experiment Station and therefore of unquestionable authenticity. The cow is about 9½ years old and her average weight during the year was 1150 lbs. During the year beginning October, 1904, and ending September, 1905, she gave 14920.8 lbs. of milk containing 857.15 lbs. of butter fat, the equivalent of 1000 lbs. of butter. This is a marvellous record and shows what the Guernseys are capable of doing. She

actually made more than two-thirds of her own weight in butter in the year.

THE AGE OF THE PROFITABLE FEEDING STEER.

It requires about one-half as much grain to produce a hundred pounds of gain on calves as on two-year-olds. The work of the Missouri Agricultural College has definitely demonstrated that the most profitable age to fatten cattle is while they are still young. The older the animal, the more food is required to produce a given gain. Other stations have also investigated this question and have arrived at the same result.

The Central Experiment Station Farm at Ottawa, Canada, found by comparing one thousand pounds live weight in the case of calves, yearlings, two, and three-year-olds, that the profit for each one thousand pounds, was: calves, \$31.00; yearlings, \$27.00; two-year-olds, \$19.10; three-year-olds, \$12.80.

When all of the cattle of all ages were purchased at 4c. a pound and sold fat at 5c. a pound, the profit on \$1,000 invested in feeding cattle was: calves, \$557.50; yearlings, \$284.00 two-year-olds, \$198.75; three-year-olds, \$177.50.

Nine-tenths of all the cattle fed in the Middle West are two-year-olds at the beginning of the feeding period. When these cattle are in thin condition at the beginning of the experiment, they are often fed with profit; but starting with calves in the same condition it is unquestionably true that the calves return more profit for each thousand dollars invested than the older cattle.

F. B. MUMFORD,

Professor of Animal Husbandry,
University of Missouri.

GOOD STOCK AND PROSPERITY.

Editor Southern Planter:

Hon. G. W. Koiner reports the sale of 2,500 farms in the past twelve months in Virginia, aggregating \$8,000,000, and all of these farms were sold to parties outside the State; good and will be better—as the tide of immigration is south now, it used to be West—No climate excels ours in old Virginia, and lands are cheap, comparatively; we will soon see our old State again back at the head of the list of States or close up to the top.

Where Western and Northern capital is interested you will find better stock raised and "scrubs" relegated to the rear, and this is as it should be, for a "scrub" consumes as much and often more food and sells for a great deal less and never attains the size

of well-bred stock. When you run across well kept houses and outbuildings on a farm, you can count on seeing good stock, as this kind of stock brings prosperity and high priced lands are made so by the manure from stock, as the crops are fed on the land and not sold except in the finished live stock, horses, cattle, hogs and sheep. This good old county of Rockingham which stands first of the 100 counties of Virginia as to wealth and education was made so, by good stock principally, as the farmer who breeds and feeds "scrub" stock in Rockingham is a scarcity. Our farms are rich as a rule and our farmers prosperous. I know waste places that have been made productive and to-day are producing good corn, wheat and hay, all done by feeding and keeping plenty of stock. When first taken possession of by the present owners feed of all kinds was purchased, as the farm would not produce enough grain to to keep the work horses unless the whole farm had been cropped; grass was unknown when these farms were purchased by the present owners.

The Southern Planter has done a great deal to help to direct immigration to old Virginia.

Rockingham Co., Va.

JNO. F. LEWIS.

BREEDING EWES FOR TWIN LAMBS.

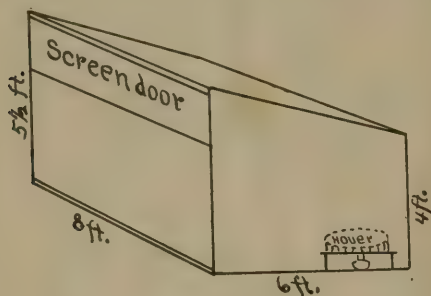
A Canadian gentleman, a large breeder of sheep thus describes how he proceeds to secure twin lambs:

"He keeps three rams, two pure-breds of the same breed and physical characteristics, and a third ram which he calls a "teaser" and may preferably be a scrub ram. This "teaser" he has patched and covered with black paint, a mixture of lampblack, turpentine and a little oil. With this mixture he paints the brisket of the animal in the breeding season. The two breeding rams are secured away from the ewes and fed well. When the breeding time comes about he lets the "teaser" ram well painted with fresh paint, loose among the ewes at night. In the morning he tells by observing black paint on the backs of the ewes which of his ewes are in heat. As the "teaser" ram is patched he cannot serve. Next night he lets one of his purebred rams with those marked ewes, taking him away in the morning, and on the second day lets his second pure-bred ram with those same ewes. In this way he knows when any particular ewe is in heat, and takes advantage of this to get a "double conception" before the period of heat expires. If all works well, as it generally does he gets one lamb from the first service of one of his rams, and then gets another from the same ewe from the service of the second pure-bred ram and thus gets his ewes doubly conceived. The method he calls superfoetation."

The Poultry Yard.

POULTRY NOTES.

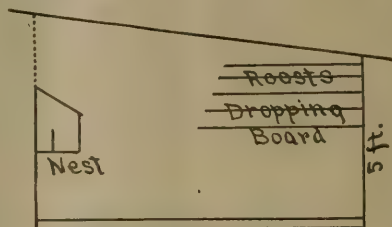
One can keep a few fowls in a dry goods box or a piano case, but where hundreds are kept, good, roomy, houses are a necessity. I have had various kinds of houses, colony coops, small brooders, etc., and here give my conclusions and plans as I now see them for best results. First we must raise the chicks. This means good incubators to hatch them, then good brooders to raise them in. I will take no notice of the various incubators. There are a few good ones, some fairly good, some worthless. The same is true of brooders. Every manufacturer has the best. His machines have won gold medals and



Brooder

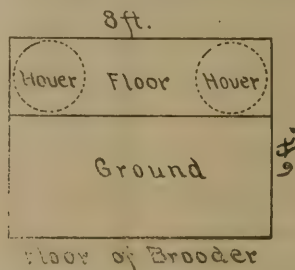
volumes of testimonials are sent out. Manufacturers rate the capacity of their brooders too high. The hover of nearly all brooders is less than two feet in diameter. This is all there is to it to keep the chicks warm. A good sized hen can "spread" herself as large as an ordinary hover. Would anyone think of giving a hen 75 to 150 chicks to hover? No! If he knew anything about the business. Many people will pour that number of chicks into a little box with a lamp under it and disease soon reduces the number to 25 or 30, about what a good hen can hover, and these live. Nothing strange or marvelous about this. It is natural. They must have room, fresh air and exercise. The best brooder to raise chicks is not necessarily an expensive one. They must be storm proof and have meat enough to keep the chicks warm when they want to be warm. They must be proof against all kinds of vermin. Easy to clean. Have room to feed and exercise. I find a brooder six feet wide, eight feet long and four by five and a half feet high large enough for 75 chicks. This brooder or colony brooder it may be called, has two hovers two feet in diameter, two lamps, is made of matched lumber has a floor 30 inches wide, eight feet long, 6 inches from the ground at the rear side.

At each end of this floor is a galvanized heater dome 7 inches high and 7 inches in diameter, with half inch mesh screen around it. Galvanized iron lamp boxes underneath. This floor is the level of the



Cross Section of Poultry house

space under the hover and has a board or screen 18 inches high along the front side to keep chicks on the floor the first week or ten days. This gives them two and a half by four feet floor space to feed and exercise. Then a bridge is put in and they are allowed to run on the ground in the brooder until 4 weeks old, when they may be let out part of the day. The sills are 2x4 and extend 1 inch below siding and are rounded at ends so it can be moved easily. The upper 18 inches of the front is a frame covered with inch mesh netting and muslin and can be thrown open



Floor of Brooder

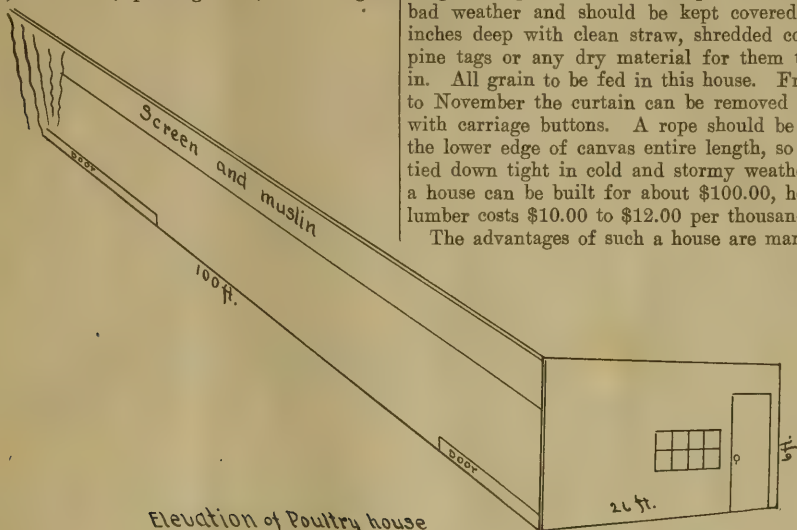
in warm sunny days. As soon as cockerels are large enough for broilers they are sold and hovers and domes taken out and tressels and poles put in on the floor space for pullets to learn to roost. This is large enough for 30 to 40 pullets until nearly full grown. I think the cuts will make this plain.

The house—I decidedly favor the large house in preference to the colony house plan. I herewith give a plan of the best all around house that I have ever used. It can be made as long as needed and can be extended at anytime. I prefer the ground for the floor raised 8 to 10 inches higher than the general level outside, with a trench 6 to 8 inches deep all

around the outside. This house is made L shape with the long part standing East and West. The L is 10x16 feet and used for a work and storage room for feed, &c. This gives room for 3 bins, a feed mill, bone mill, packing table, &c. A good

clusters (60 nests) is ample for every 100 feet of house. This house will accommodate 500 laying hens. Self-feeding boxes for shell, grit, charcoal and dry bran, can be placed at ends of house. This arrangement gives entire floor space for feeding in bad weather and should be kept covered 6 to 10 inches deep with clean straw, shredded corn stover pine tags or any dry material for them to scratch in. All grain to be fed in this house. From April to November the curtain can be removed if put on with carriage buttons. A rope should be sewed in the lower edge of canvas entire length, so it can be tied down tight in cold and stormy weather. Such a house can be built for about \$100.00, here where lumber costs \$10.00 to \$12.00 per thousand.

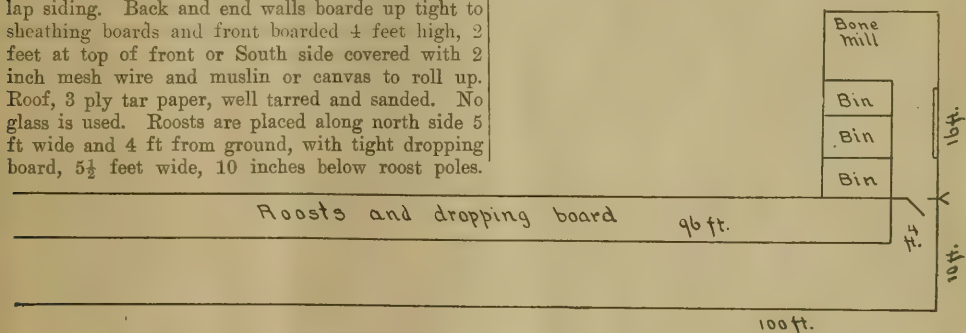
The advantages of such a house are many. Here



Elevation of Poultry house

window is placed in front, also door, and door into poultry room. Poultry room is 10x100 feet, 6 feet high in front and 5 feet in rear. Frame is all 2x4, studs and rafters, 2 feet from centres. Sides and ends are covered with red rope building paper and lap siding. Back and end walls boarded up tight to sheathing boards and front boarded 4 feet high, 2 feet at top of front or South side covered with 2 inch mesh wire and muslin or canvas to roll up. Roof, 3 ply tar paper, well tarred and sanded. No glass is used. Roosts are placed along north side 5 ft wide and 4 ft from ground, with tight dropping board, 5½ feet wide, 10 inches below roost poles.

are a few of them. Easy to clean, all the floor space for a "living room" economy of time in care and feeding, plenty of light, sunshine and pure air, dry and roomy. Have never had a case of cold, roup, catarrh or sickness of any kind in such a house. Fowls can



Ground plan of poultry house

Nests, in clusters of 4 are placed 2 ft from ground along front side of house, with entrance at rear and ends and steep pitched cover, lower half hinged, to get eggs and broody hens easily. 15 of these 4 nest

be kept in during stormy days and have plenty of room for exercise and good light.

CAL HUSSELMAN.

Edge Hill Farm Roxbury, Va.

The Horse.

NOTES.

Floyd Brothers, of Bridgetown, well known breeders and for years past owners of the largest breeding establishment on the Eastern shore of Virginia, report a prosperous season for 1905, and a very favorable outlook for the coming one. They own the stallions Sidney Prince, 2:21½, and Col. Sidney, both producing sons of the noted Sidney, 2:19¾; Red Oliver, chestnut colt, 4, by Electrite; Red Dillon, bay colt, 3, by Baron Dillon, and Moko, Jr., brown colt, 4, by Moko, the sire of Ferenó, 2:05½.

Writing under recent date, the Messrs. Floyd state, in addition, that Sidney Prince made a very heavy stud, having served 102 mares, while six others were refused from a breeder in lower Maryland last week. This at a fee of \$35, with money refunded in case of failure. Their brood mares and stallions are reported as doing well, but all of the younger material fit for use has been sold out. Ten brood mares, all of them highly bred, are in foal to Sidney Prince. Thirteen head, the get of the Floyd stallions, have been sold from the county this year for \$10,300, an average of close to \$800 per head, ages ranging from three to seven years. \$1,150 was refused for two other three-year-olds. Of those sold, eight were by Sidney Prince, three by Col. Sidney, and one by Lee Cuyler. Four of the number were young and green, being comparatively unbroken, yet they brought from \$225 to \$350 each, which, of course, materially reduced the average.

Lord Chancellor, the black son of Dare Devil, 2:09 and Princess May R., by Prince Regent, 2:16½, is wintering finely in the stable of his owner, W. J. Carter, at Manchester Va., where some good mares are being booked to him for the coming season. Lord Chancellor is inbred to the famous sire and noted progenitor of show ring winners, Mambrino King. as both Dare Devil and Prince Regent were gotten by that great son of Mambrino Patchen. It is such blood as this that improves the stock of any section, as with rich breeding Lord Chancellor combines fine size, style and the high action so much sought for in harness horses now, then, too, he is young sound and without blemish. From five mares bred to him in 1904, in his five-year-old form, the beginning of his stud service, three foals were dropped last spring, all owned by Richmond men and a clever trio of youngsters these yearlings are now. One of them is from Louise, full sister to Branchwood, 2:32½; bred and owned by W. L. Bass, the Acca Farm trainer, who had Lord Chancellor in 1904 and 1905 and drove him a mile in 2:27½ during the latter sea-

son.

The Orange Horseman's Association met recently at Orange, Va., and in addition to election of officers transacted other important business.

Building a club house on the grounds for the Association is contemplated and a committee was appointed to secure plans and perfect other arrangements. With affairs reported as prosperous it may be said that the Orange Horseman's Association is one of the best known organizations of its kind in the State, and its annual open air Horse Shows are popular affairs that meet with generous patronage and support of the best people in all that section.

The election of officers resulted in selections as follows:

Thomas Atkinson, president; John T. Lightfoot, first vice-president; H. O. Lynn, second vice-president; George S. Shackelford, third vice-president; and the following directors: William Du Pont, H. T. Holladay, Jr., William C. Williams, James B. McComb, R. C. Booton, Frank Vanderhof, W. W. Sandford S. H. Garnett.

The Richmond Horse Show held last month was a success both in character of exhibits and attendance. After all expenses were paid, a balance of some \$4,000 or more was left over. Another year the scope of the Association will be widened and doubtless we are to witness even a better show than has been previously held here. The plan generally favored seems to be that our old State fairs and race meetings should be restored and held in conjunction with the Horse Show, as then during the day the former might be on and at night we might witness the parade of fancy equine performers on the tan bark enclosure.

The bay mare by Pilot Wilkes, son of George Wilkes, dam Nettie Patchen, by Jeb Stuart, has been registered as Carrie Whitehead, and her foal of 1905, the bay filly by Kelly, 2:27, likewise recorded as Doris Kelly. Both are owned by Dr. W. H. Whitehead, the Atlantic Coast Line R. R. surgeon, Rocky Mount, N. C. Doris Kelly, now four months old, seemed to know nothing but the pace until quite recently, but now she goes on a trot and can runaway at that gait.

Prince of Traer, 2:24½, the big trotting stallion by Idol, Jr., is being driven on the road by Joseph Lassier, of the Richmond Horse Bazaar. The black son of Idol, Jr. is a mastodon in size, being close to 16:2 in height and weighing over 1,200 pounds, yet he is handy in harness and can get away quick.

BROAD ROCK.

Inquirers' Column.

Enquiries should be sent to the office of THE SOUTHERN PLANTER, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

HOG WEED.

I enclose a common weed, which is known as the "hog weed." I wish you would give me the right name for it. Hogs are very fond of it any time during the year even when cut and dried. Please tell me if it is any good as a land improver, and if it will pay to plant it for hogs.

A. MUSTOE.

Orange Co., Va.

The plant sent is slender Pig weed. It is an annual plant and not worth production for any purpose. Hogs eat it, as they will almost any tender green plant that grows, but it has no further value and except for the amount of humus it makes in rotting in the ground, has no fertilizing value. Do not be tempted to grow weeds of any kind and this is nothing but a weed.—Ed.

PLOWING LAND FOR CORN.

I have 10 acres of clover ground that I want to plant in corn next spring. "The ground is rich." Now I want to know if I ought to plow the ground this fall with a two horse plow or wait till spring to plow it.

C. A. JONES

Forsythe Co., N. C.

Plow the land deeply at once and if the subsoil is a good clay one, also subsoil it. In this issue you will find our views on this subject of fall-plowing and its advantages for Southern lands in the article on work for the month.—Ed.

SOY BEANS.

1. When and how should Soy Beans be planted, how fertilized, how worked, how harvested? &c.
2. Do they make a good hog feed cracked in a feed crusher, or should they be ground for hogs?

3. Are cow peas cracked or ground a good feed for hogs? SUBSCRIBER.

Baltimore Co., Md.

1. Soy beans should be planted in rows 2 feet apart with a drill, dropping the seeds 6 or 8 inches apart if intended to be grown for a seed crop, and should be cultivated like a corn crop and be harvested like a cowpea crop. If intended for a hay crop, sow broadcast at the rate of 1 bushel per acre.

2. An article in the last issue of The Planter demonstrated what a valuable feed they are for hogs. Refer to this article, page 831.

3. Yes, excellent.—Ed.

PREPARING LAND FOR TOBACCO.

I have a lot of land which is a grey or sandy soil, very poor, which I planted to corn this year, and sowed peas at last working of corn. The peas made a medium crop, corn very poor. The land I wish to plant to bright tobacco next year, using a small quantity of stable manure on part of same. How should this land be managed? Would lime be proper to use for bright tobacco? If so, when should lime be applied; also how much? Should the land be subsoiled? Where can I get lime nearest me?

A SUBSCRIBER.

Lunenburg Co., Va.

Plow the land at once and apply 25 bushels of lime per acre after plowing and harrowing lightly and let lay until

February. Then apply 150 lbs. of acid phosphate and 100 lbs. of sulphate of potash per acre broadcast, and work the same into the land with a disc harrow or cultivator and let lay until May. Then replot and work finely and lay off the rows, applying 100 lbs. of dried blood per acre broadcast in the rows and mix well with the soil and let lay until a season for planting comes. Then freshen up and plant. After the plants have commenced to grow freely, 50 lbs of nitrate of soda applied broadcast down each side of the rows but not letting it touch the plants will stimulate the growth and enable the crop to get hold of the fertility in the land.—You can get lime at any depot on the Norfolk and Western or Southern R. R. by buying through Mr. T. O. Sandy, of Burkeville.

FERTILIZER FOR CORN CROP AND COW PEAS.

1. Will you be kind enough to let me know what would be the best manure to use for a corn crop on bottom land which has been in cotton for two years. Clay subsoil.

2. What would grow peas? They come up but soon die. It will make corn or cotton. I want to make an extra crop of corn on said bottom land. Will nitrate of soda do good? How much potash, and what kind?

3. Will muriate of potash help cotton? How much to the acre?

JOHN M. GEE.

Harnett Co., N. C.

1. The use of any fertilizer other than farm yard manure in making a corn crop has rarely, if ever, in any part of the country proved profitable, and therefore we have always been opposed to the practice. If the production of crops does not result in profit either directly or indirectly, a farmer has no business to produce such crops, except it may be necessary not for fun but for the money to be made out of the work. With this premise, we would say probably an application of lime, say from 25 to 50 bushels to the acre would result in greatly increasing the yield of the crop, by making available the potash in the soil and producing better physical and mechanical conditions of the soil. These bottom lands are almost always rich enough in nitrogen for the production of a maximum crop of corn, but in some cases lack both phosphoric acid and potash to balance the nitrogen and hence fail to make as good a yield as the amount of nitrogen present and available would render possible. This may be so in your case. In addition to the lime we would therefore apply 300 lbs. of acid phosphate per acre. If your object in producing the crop is merely to see how much you can produce per acre regardless of profit in the production, then it will no doubt be advisable to apply nitrate of soda during the growth of the crop—that is to say at intervals during the cultivation. This you may use at the rate of 75 lbs. to the acre at each cultivation, applying the same broadcast down each side of the rows.

2. Apply 300 lbs. of acid phosphate and 50 lbs. of muriate of potash per acre before sowing the peas, and 50 lbs. of nitrate of soda per acre just when the peas commence to grow. You should then secure a crop.

3. Kainit is better for the cotton crop to supply potash than muriate of potash, as it has an excellent effect in preventing rust. Use 200 lbs. per acre.—Ed.

DISEASED APPLE TREE.

Enclosed please find twig cut from red apple tree. You will greatly oblige me by telling me what it is and what is necessary to stop it as well as prevent any further attack.

EDMUND CHRISTIAN.

Norfolk Co., Va.

The twig is affected with blight commonly called "fire blight." There is no cure for this disease except cutting out the blighted wood some distance below the point to which it has extended, and burning the same. The disease is a bacterial one and easily communicable from one tree to another by insects or contact of the diseased wood.

—Ed.

GRUB IN HEAD OF SHEEP.

I would like you to give a solution to kill grub in the head of sheep. This is the worst thing troubling sheep in the mountains of Virginia.

It generally gets in head about the time they are three years old.

J. W. BONNER.

Bath Co., Va.

Grub in the head of sheep is caused by the Gad fly which is found pester the sheep during the summer months. These lay their eggs in the nostrils of the sheep and the larva there hatch and make their way up into the passages running up the sides of the head. There they remain until they have attained their growth, and are then mostly expelled by the sneezing of the sheep, such sneezing being caused by the tickling and irritating motions of the grubs. When forced out the grubs bury themselves in the ground and there pass the next stage of life, hatching out in the spring into flies again. Very few of the grubs get into the brains of the sheep, though some may do so. After they once get there they can only be removed by the operation of trepanning the skull. The only way to mitigate the trouble of these pests is to blow up into the nostrils some mild irritant which will cause the sheep to sneeze. Some shepherds use snuff for this purpose. Others syringe the nostrils with a weak solution of turpentine and water. By these means, most of the grubs are caused to be expelled, and they should be killed as they are expelled, and thus lessen the broods of flies.—Ed.

PORK PICKLE—PLANT FOR NAME—BARLEY—RAPE—CRIMSON CLOVER SEED.

1. Please state how to make a good pork pickle?
2. Which kind of barley will pay best, winter or spring barley.
3. Give name of plant enclosed, and state if it has any value?
4. I have a hog lot of about $1\frac{1}{2}$ acres, fairly well set in orchard and blue grass, will it pay me to plow it up in the early spring and sow in rape for my hogs?
5. How long can crimson clover seed be kept before they lose their vitality?

C. M. FARRAR.

Putnam Co., W. Va.

1. Make a strong brine using clean, soft water, by adding as much salt as the water will dissolve and a quarter of a pound of saltpeter to each 5 gallons of water. Boil and skim. Whencold, pour on to the pork sufficient to cover it well and keep the meat weighted down so as always to be covered with brine. Add a handful or two of salt to the brine occasionally, as long as it is kept in use.

2. Winter barley succeeds best in the South.

3. The plant enclosed is Yarrow. In some parts of the

old world it is valued as a forage plant but here it is a troublesome weed, taking the place of better feed.

4. Whilst rape is valuable as a grazing crop for hogs, and ought to be much more largely grown, yet we much doubt whether it would be advisable to plow up an orchard and blue grass sod to plant the crop. Such a sod is not so easily got as to be only worth this use. When the sod is running out, then plow it up and grow rape for a year or two and seed in grass again.

5. Crimson clover seed should not be over 12 months old to ensure good germination.—Ed.

COTTON SEED MEAL AS A FEED.—LONG FEED FOR COW.

In your last issue, I note remarks on the advantage of cotton seed meal against wheat bran for making cheap butter and milk. Please state what quantity can be safely used per cow? Please suggest a good long feed for me, as I have to buy much of my feed.

AN OLD SUBSCRIBER.

Chesterfield Co., Va.

In commencing to feed cotton seed meal to cows use not more than 2 pounds per head per day for the first month. Then increase gradually to not more than 4 or 5 pounds per day. Corn fodder, cow-pea hay, clover hay, and oat straw all make good long feed for cows. A mixture of these is better than any one used alone.—Ed.

SEX OF GEESSE—SCAB ON IRISH POTATOES.

1. Please tell me how to tell the difference between a goose and a gander.
2. What makes Irish potatoes have scab on them and be rough all over?

SUBSCRIBER.

Chesterfield Co., Va.

1. In this issue we have replied to a similar enquiry. See that answer.

2. The cause of the scab is a bacterial disease often implanted in the soil by barn yard manure infected with the disease. It may be largely prevented, in fact, be almost obviated by dipping the sets in a solution of corrosive sublimate before planting. We published the formula for making this solution last spring and shall endeavor to bear in mind to publish it again before potato planting time.—Ed.

LIMING LAND.

1. I have a tobacco lot that I want to put lime on. It is in sod now and will come in tobacco next year. I want to plow the land and put a covering of stable manure on it between now and next spring. I have always understood that it would not do to put lime along with manure. How would it do to sow the lime on the sod and then plow the land and spread the manure on top and work it in with harrow?
2. I have a creek flat that is wet, so much so that I think the land is soured. I am thinking of putting lime on it. It was in corn this year and I want to put it in corn next year. When should I put the lime on?

J. A. DAVIDSON.

Campbell Co., Va.

1. Lime and manure should never be applied at the same time to land. The lime will liberate the nitrogen and cause it to be lost. Plow the land now and then apply the lime and harrow lightly. In the spring the manure may be applied safely and be worked in during the preparation of the land for the crop.

2. What this creek flat wants is draining. It will then

be quickly rendered sweet by an application of lime. Whilst it remains water sogged, lime will not help it much, though it may be of temporary assistance. Plow at once and throw up in beds to help the drainage and then apply the lime and harrow lightly.—Ed.

BLIGHT OF CUCUMBERS.

1. Do you know how to prevent cucumber vines from blighting? My late vines have all died for some years.

2. Where are incubator fixtures made?

Z. S. MOFFIT.

1. The cause of the blighted vines is either anthracnose or the wilt disease. For anthracnose, spraying with Bordeaux mixture is a preventive. Wilt is a spore disease, which infects the soil and will reappear in every cucumber crop planted on land once infected, unless the land be used for some other crops of a different character for two or three years.

2. The makers of the machines supply the fixtures.—Ed.

JOHNSON GRASS.

I write for information how to kill Johnson grass. We have it on our farm and the more we cultivate it the worse it gets.

C. O. WRIGHT.

Fentress Co., W. Va.

Plow the grass up at once and harrow, thus turning the roots well on to the top and the winter's frosts will kill most of it. In the spring turn hogs on the field and they will root out and eat most of what is left of the roots. Plow again in the fall and the second winter's frost will clean up any may have survived.—Ed.

SOY BEANS.—SILO BUILDING.

I have noticed that you strongly urge the cultivation of the Soja bean, but before adopting your advice, I would like to ask a few questions.

1. Is this soja bean eatable by hogs or cattle in the green state or must the beans be ripened and threshed out?

2. Is this soja bean similar to or the same plant as what is called in England the horse bean?

3. I am told the yield per acre is about 15 bushels; would that pay half as well as field peas sown any time this winter? If stock can eat the hull and stalk of the soja bean, would it not be advisable to sow some with peas, thus providing something for holding up the pea vines.

4. Kindly tell me where I can get some good instruction about building a silo?

AN ADMIRER OF THE SOUTHERN PLANTER.

Henrico Co., Va.

1. Yes. Soja, or more correctly soy beans, are eaten readily by hogs or cattle when in the green state and make most excellent feed. They can also be cut at the period of their growth when the beans are in dough state and be cured into most nutritious hay.

2. No. The soy bean is an introduction from Japan. It does well all through the South, whilst the English Horse bean fails here.

3. We have known the Soy bean to make 25 bushels to the acre here. Field peas (Canada peas) are valuable as a winter growing forage crop in the eastern part of this State and as a later crop in the mountainous parts of the

west of the State, but they will not stand warm weather. They must complete their growth by May here. They are essentially a cold climate crop. Soy beans are a cold climate crop. Field peas make their best growth on this continent in the extreme Northern States, and in Canada, whilst Soy beans will not grow there at all. The two crops cannot, therefore be grown together.

4. We have published numerous articles in The Planter giving very full instructions on Silo building. There are also several books published on the subject. One of these, Soiling Crops and the Silo, by Shaw, we can supply. Price \$1.50.—Ed.

KILLING STUMPS. SEX OF GEESSE.

1. Is there anything that you can put in a stump to kill it?

2. How can I tell a goose from a gander?

SUBSCRIBER.

1. The only way to kill a stump is to prevent it throwing up sprouts by cutting them off as soon as they appear and to cut off the roots.

2. Geese and ganders are very difficult to tell asunder when young. We know of no certain test except the more masculine appearance of the male birds and the harsher noise they make.—Ed.

VARIETIES OF APPLES FOR PIEDMONT, VA., SAN JOSE SCALE.

Please give me a few of the best keeping (Winter) apples for this section (Piedmont), taking in consideration their quality and bearing capacity. Also a few of the best early, Summer and Fall apples for family use.

I have a few apple trees set out and wish to graft or bud them with some of the best fruit in the neighborhood. It there any way known by which I can do so and take no risk in getting the scale?

H.

Bedford Co., Va.

For winter apples, Grimes Golden, Winesap, York Imperial. For summer apples Early Harvest or Early Ripe. For Fall, Buckingham, Maiden Blush, Smokehouse. You can only be certain not to introduce San Jose Scale by getting your grafts and buds from growers who have never had the scale on their place.—Ed.

WHAT THOROUGH PREPARATION OF THE LAND CAN DO FOR A CORN CROP.

In our last issue we published a communication from Dr. Stephen Harnsberger on "Acid phosphate as a Fertilizer," in which he described how he prepared a piece of land for a corn crop which he was assured by an old resident had never produced a crop of any kind, it was so poor. We have now a letter from Mr. Harnsberger in which he says that the corn grown on that land has been shucked out and made a yield of 66 2-3 bushels per acre. Perfect preparation before planting and "no beds," that is to say level cultivation, the doctor says was the secret of his success.

Miscellaneous.

REMINISCENCES OF MR. EDMUND RUFFIN.

Editor Southern Planter:



In sending me your excellent Journal of Agriculture and its Cognates, you place an old Confederate Chaplain, who put all of his eggs, goose-eggs and all, in the basket of "The Lost Cause" and got them all broken, under such obligation, that he must do some little thing to show his gratitude.

From observation, you know that the garrulity of old age passed into a

proverb long before the days of Runnymede. As an old man, holding the oldest commission as Chaplain, in the Confederate Army, it may be allowed me to say that one of the prerogatives of old age—under the supreme equity of God—one of the most pleasing provisions of the great Law of Compensation—is, in these evil days, to delve deeply into the great field of *Reminiscence*. We old men live in the Past. Is not this the reason that we old grandfathers love and spoil our grandchildren? On the applied principle of extremes meeting, we love to go back to the sunny hours of our own childhood so delightfully linked with the old home, where as memory glorifies them, under the smile of the Saintry Mother, the grass is greener, the sky bluer, the song birds sweeter and all in all, Heaven a little nigher than any other spot on this earth.

I am sure you will pardon this indulgence in Reminiscence. I go back and as a slender slip of a boy in the early part of the last century, I am sitting on the porch of the old plantation home in Tidewater, North Carolina. The Venerable Nestor of Agricultural Journalism, Mr. Edmund Ruffin, is my honored father's guest. He has left his home in Virginia to deliver a series of Lectures, or as he terms them, "Home-Spun Talks" to the intelligent, prosperous planters of Eastern North Carolina. He was somewhat beyond the prime of his splendid manhood, but fully in possession of that intellectual vir-

ility, which made his life a blessing to that splendid type of American citizenship, who in the conservative atmosphere of their plantations, all over the South, did so much to safeguard the Republic.

These two gentlemen of the Old School were of such fine courtesy as always to knock at the door of the wife's bed-chamber. You may be quite sure the conversation was pitched on the high plane of a vigorous grasp of the subject discussed.

They were deeply interested in the problem of restoring fertility to the broad acreage of over-worked and under-fed fields in the South. Mr. Ruffin's theory was this: In the Tidewater counties of N. Carolina and Virginia, the texture of the soil was far too loose and the heat of the summers was far too great and long sustained to employ clover profitably either as a hay crop or as a green manure. He said that the Black pea was better than clover, in that, it was both grain and forage. His theory was, that, if the farmers would sow the peas on the land they wished to reclaim and when in the flower they would spread marl on it, say 100 bushels to the acre, and then turn the crops and marl under, there was scarcely any assignable limit, by frequent applications, to be given to the fertility of the soil. He said the pea was the beef steak and the bone, and the magnesia and phosphoric acid of the marl was the gastric juice which gave the needed plant food.

We do not think too high an estimate can be placed upon the far reaching efforts of Mr. Ruffin to help the American Agriculturist while one recognizes the fact that he was the enthusiastic, intelligent pioneer in advocating scientific farming. He, with the old planters whom he so nobly served, has passed away, but the value of his rich contributions to American tillage will long survive him. It is a matter of sincere congratulation to the Southern farmers that Mr. Ruffin's mantle of high usefulness has fallen upon shoulders admirably capable of sustaining his work. No more useful citizen lives than he who devotes his best energies in helping our generous Mother Earth, with the blessing of the early and latter rains, with God's sunshine and dew, to respond to man's necessities, that our valleys, plains and hill sides shall stand so thick with corn that the widow and the orphan shall have bread most plentifully and be greatly satisfied.

Rockbridge Co. Va.

ASHBY.

CURING ALFALFA HAY.

Mr. Clark, of Higganum, Conn., writes us that his further experience in curing alfalfa has convinced him that it would materially conduce to heavier crops of alfalfa hay if the hay when cut could be cured on racks, as he learns is the custom in parts of Germany. The curing of the crop on the alfalfa prevents the quick growth of the succeeding crop as the yield is usually so heavy as to partially smother the new growth. Mr. Clark pays us the compliment of saying that he knows of no other agricultural journal which contains so much sound, common sense and knowledge as *The Planter*. We thank him for these kind words which we appreciate highly.

THE ANGOUMOIS GRAIN MOTH (*Sitotroga cerealella* Ol.).

This moth received its name from the province of Angoumois, France, where it is known to have been injurious since the year 1736. In this country, where it is familiarly but incorrectly called "fly weevil," it is said to have been recognized as early as 1728. From the seat of its supposed introduction,

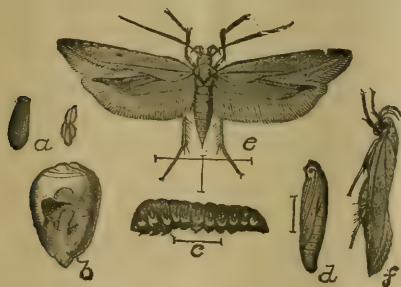


Fig. 1.—*Sitotroga cerealella*: a, eggs; b, larva at work; c, larva, side view; d, pupa; e, moth; f, same, side view (from Chettenden, U. S. Dept. Agriculture).

in North Carolina and Virginia, this moth has spread to neighboring States in the South, where it does incalculable damage, and to the southern portions of the Northern States, where it is less injurious. Although not so widely distributed as the true grain weevils, it is rapidly increasing its range, and as it attacks grain in the field, even as far north as central Pennsylvania, as well as in the bin, is even a more serious pest in the localities in which it has become established than the weevils. It infests all

the cereals, as well as buckwheat and the chick-pea, a product of the Tropics. It has been estimated that in six months, grain infested by this moth loses 40 per cent. in weight and 75 per cent. of farinaceous matter.

The adult insect resembles a clothes moth, for which indeed it is often mistaken. It is light grayish brown in color, more or less lined and spotted with black, and measures across the expanded forewings about half an inch (see fig. 1). The hindwings are bordered with a long, delicate fringe.



Fig. 2.—Ear of pop-corn showing work of Angoumois grain moth (from Riley, U. S. Dept. Agr.).

The moth deposits its eggs in standing grain and in the bin, singly and in clusters of from 20 to 30. The eggs, shown, much enlarged, in the illustration, are white when first laid, but soon turn red and hatch in from four to seven or more days, when the minute larvæ or caterpillars burrow into the kernels and feed on the starchy interior. A single larva inhabits a grain of the smaller cereals, but maize affords sustenance for two or more individuals. A kernel of corn opened to show the larva at work is reproduced at fig. 1, b, and an ear of infested pop-corn is shown at fig. 2. In three weeks or more, according to season, the caterpillar attains maturity, when it spins within the kernel a thin, silken cocoon and transforms to a pupa or chrysalis, the moth emerging a few days later, the entire period from egg to adult embracing in summer time five weeks and in colder weather considerably longer. After copulation, the moth deposits eggs for another brood, and thus several generations are produced in the course of a year.

The measures to be employed in the control of insects affecting stored products are both preventive and insecticidal. As an insecticide nothing answers the purpose so well as bisulphid of carbon, which is a nearly perfect remedy against all insects that in-

fest the storehouse. The remedies that will be discussed, while intended primarily for use against insects in stored grain, have an almost equal value against all forms of animal life that occur in products that are dried and kept in storage.

A limited number of insects, like the Angoumois grain moth in the extreme South, enter the grain in the field, and certain precautions are therefore necessary to prevent their access to the granary. This is accomplished, *first*, by harvesting as soon as the grain is ripe; *second*, by threshing as soon afterwards as possible.

In the process of threshing or cleaning much infested grain is blown out with the chaff and dust, and the moths and many adult weevils are killed by the agitation which the grain receives; but the immature forms of these insects, concealed in the kernels as eggs, larvæ, and pupæ, are apt to survive this treatment, and further measures are necessary for their destruction.

For this purpose a quarantine bin is desirable, to be as nearly air-tight as possible, in which the newly threshed as well as the infested or suspected grain can be fumigated with bisulphid of carbon.

Fresh grain should not be exposed to insect attack by being placed in bins with "weeviled" grain, or under the same roof with such grain. If before storing in buildings that have been infested, the old grain be removed, the bins thoroughly cleaned, floors, walls, and ceilings brushed and scrubbed, the chances of infestation will be reduced to a minimum. If the storehouse has been badly infested, a fumigation with bisulphid is necessary.

Cleanliness will accomplish much toward the prevention of injury, the cause of a great proportion of injuries in granaries, mills, elevators, and other structures where grain and feed are stored being directly traceable to a disregard of neatness. Dust, dirt, rubbish, and refuse material containing sweepings of grain, flour, and meal are too frequently permitted to accumulate and serve as breeding places for a multitude of injurious insects. Floors should be frequently swept, and all material that has no commercial value burned.

The simplest, most effective, and inexpensive remedy for all insects that affect stored cereal and other products is the bisulphid of carbon, a colorless liquid with a strong, disagreeable odor, which, however, soon passes away. It vaporizes abundantly at ordinary temperatures, is highly inflammable, and is a powerful poison.

It may be applied directly to infested grain or seed without injury to its edible or germinative principles by spraying or pouring, but the most effective manner of its application in moderately tight bins or other receptacles consists in evaporating the liquid in shallow

dishes or pans, or on bits of cloth or cotton waste distributed about on the surface of the infested material. The liquid rapidly volatilizes, and being heavier than air descends and permeates the mass of grain, killing all insects and other vermin present.

The bisulphid is usually evaporated in vessels containing one-fourth or one-half of a pound each, and is applied in tight bins at the rate of a pound to a pound and a half to the ton of grain, and in more open bins a larger quantity is used. For smaller masses of grain or other material an ounce evaporated to every 100 pounds of the infested matter. Bins may be rendered nearly air-tight by covering with cloths, blankets, or canvas.

Infested grain is generally subjected to the bisulphid treatment for twenty-four hours, but may be exposed much longer without harming it for milling purposes. If not exposed for more than thirty-six hours its germinating power will not be impaired. In open cribs and badly infested buildings it may sometimes be necessary to use a double quantity of the reagent and repeat treatment at intervals of about six weeks during the warmest weather.

Mills and other buildings, when found to be infested throughout, may be thoroughly fumigated and rid of insects by a liberal use of the same chemical. A good time for this work is during daylight on a Saturday afternoon or early Sunday morning, closing the doors and windows as tightly as possible and observing the precaution of stationing a watchman without to prevent anyone from entering. It is best to begin in the lowest story and work upward, to escape the settling gas. The building should then be thoroughly aired and the grain stirred early Monday morning.

For the fumigation of a building or a reasonably close room it is customary to evaporate 1 pound of the bisulphid for every 1,000 feet of cubic space. In comparatively empty rooms, and in such as do not admit of being tightly closed, two or three times the above quantity is sometimes necessary.

Certain precautions should always be observed. The vapor of bisulphid is deadly to all forms of animal life if inhaled in sufficient quantity, but there is no danger in inhaling a small amount. The vapor is inflammable, but with proper care that no fire of any kind, as, for example, a lighted cigar, be brought into the vicinity until the fumes have entirely passed away, no trouble will be experienced.

Bisulphid of carbon retails at from 20 to 30 cents a pound, but at wholesale, in 50-pound cans, may be obtained for 10 to 12 cents a pound. A grade known as "fuma bisulfide," for sale at the latter price, is said to be more effective than the ordinary commercial article.

At the rate used the cost of treatment is from 10 cents, upward, for each ton of grain.

F. H. CHITTENDEN,

Chief of Breeding Experiments.

Bureau of Entomology, Dep. of Agl., Washington, D. C.

(The foregoing article is published in consequence of receiving an ear of corn from a subscriber damaged badly by the larvæ of this moth and desiring information on the subject. Ed.)

DEEPER CULTIVATION AND IRRIGATION NEEDED.

Editor Southern Planter.

Somehow or other I feel to-day like "letting myself out" on ideas that have long been floating about in my mind, and have at last drifted down to the gateway and seem to want to get out.

Often and again has it seemed to me that farmers and others engaged in cultivating the ground, or interested in it (as all intelligent people ought to be), or talking about it; do not seem to begin to have an idea, or the idea, of what ought really to be the aim, as far as the improvement of the soil is concerned.

My idea on this subject, in brief, has been that the aim in this matter does not ordinarily begin to be high enough—or to speak a little more closely and accurately deep and thorough enough.

My idea has been—and it may be "only an idea" and utterly worthless practically—I do not know. My idea has been that, the aim—the final definite ultimate aim—ought to be to make all land in cultivation or that ought to be in cultivation as much like the rich alluvial soils of the world, river bottom and other, as it is possible by human art, ingenuity and effort to makethem—and that every effort and expense should be devoted to this end and aim that can be, current living, &c., being meanwhile allowed for.

Why should this not be the case? Nature, Providence, God, in this way, as in other things, gives us the hint, the example the demonstration of what can be done. They—*it* or *He*—sets the standard and shows what can be done. It is for us to imitate and follow—if and so far as it can be done.

Then again, leaving the river bottoms, rich fertile, inexhaustible, and confining ourselves to uplands, as I go along the roads I see fields of corn, cotton, tobacco, &c., varying vastly in quality and product. Here and there I see a spot in which all is rich green, flourishing and productive. What do I find there? I find a rich deep soil, finely pulverized and comminuted, richly supplied with humus and other

organic matter, well supplied with moisture. Some little spot like this is often found in fields otherwise poor looking, where washings from higher grounds have accumulated, and the soil has grown in depth and richness, year by year, and these are always *productive* and *rarely* or *never* fail. Now why should it not be, and why is it not the steady definite aim of all engaged in cultivating the ground to make and keep all upland soil just like this? and is it not practical or a practicable thing so to do? And ought it not to be one at least of our chief aims—if not the aim of the agriculturist so to do? I grant that the end is in many cases very far off and slow difficult and perhaps costly of attainment—but is it not often nearer and easier than it looks, and is it not always well worth the cost, and even great cost; if properly undertaken and gone about?

What is the secret of the immense returns in some manufactures, in railroads, &c., &c. I grant you they have made some money, much it may be, improperly by government aid, unjustly given in high tariffs, &c., by monopoly, extortion, &c., but this is not all of the case by any means. Has not their success—a large part of their large profits, been due also to the wise incurring of immense—almost fabulous expenses. Has not the immensity of return resulted from and been immediately dependent on the immense and almost fabulous expense of improvement, &c.? And has farming begun to keep step with the age in this respect.

What should the limit be, or why should there be any limit, except that of the power and reach of machinery, to the depth of the deep dark humus laden, finely pulverized moisture receiving and conserving layer on the surface of an upland field; and why should we not aim and seek to make it 12—15—18 inches or 24, instead 2, 3, 4, 5 or 6—and then think we have done wonders?

All these may sound like the questions of a tyro or an amateur—but I cannot see why they are wholly useless or unreasonable.

There are the facts in the alluvial soils of our river bottoms and other places, and in the rich spots of our uplands—what is it that makes them what they are? Is it some mysterious darkly hidden dispensation of Divine Providence, the natural causes and reasons of which are hid from our eyes? *Nay, verily.*

This may all seem very crude and so far off from practice to some—but so has every great step in advance always seemed and so will it always be.

The point I am making is that we ought to have vastly larger ideas of what can be done in the improvement the *manufacture*, if it so please the reader, of soils and a deeper clearer stronger conviction that

large expenditures, vast, fabulous ones, can be safely and wisely made in this direction.

There are, it is true tremendous obstacles in the way:

1st. It is *slow*—this is a tremendous drawback in this fast age. But, wisely done, it can be made to pay its way and more, step by step.

2nd. Though "*slow*" it has unfortunately not the corresponding advantage of being "*sure*"—that is, not to the original investor or his heirs or assigns. This is a great drawback, and arises from the shifting over flowing nature of our society. The farmer of to-day, be he never so diligent, faithful and thorough, may have, in the next generation of his own family, no one to succeed him and reap the fruit of his labors. His sons or other destined successors may all live off from the farm and leave it to run to waste and become valueless—and except in a few favored localities, near cities, towns, &c., it will not on the open market begin to bring what it is actually worth as a machine, a factory, a means, &c., instrument of production.

The entail system and fixed tenancy of England has to a large extent been a safeguard against this—but such is not the case with us. The everliving self-perpetuating corporation or trust would be one means of maintaining and continuing permanence of market in asset value in land, some day perhaps it may be largely used in farming, as it has been elsewhere, with corresponding benefit. But it would be an ill day for the country and the world when the Trust or Corporation should take the place, wholly or largely, of the small or moderate independent proprietor.

But I am straying far ahead of my text—before going back let us just be reminded that it would be well if something could be done to secure the farming industry against this drawback of a loss of value to the large and liberal improver of land, through failure in family succession and lack of ability on the part of the public generally to measure and appreciate this result and value the labor and means expended on the land.

This I fear is a real difficulty in the way of large, liberal, thorough going improvement of the soil—not only its slowness but uncertainty of result not to society generally or the State, but to the individual and his family.

This is a drawback, and there are others—it takes time and it takes money too. But will it not, does it not pay as it goes, if well and wisely done—and may not the result often be rich, splendid, highly remunerative to the one beginning it. I think so. Why then should it not be the wisely sought end and aim to go deeper and deeper, far beyond the depths ordinarily sought in pulverizing the soil or com-

minuting it, in adding to it throughout this increased depth, by soiling crops and other wise, humus, rotten organic materials, thus creating a factory for the production of crops, staple and other, like the big steel plants, &c., &c. Why may this not, why should it not be aimed at, sought after and done?

And while I am writing, Mr. Editor, just one other thing in this connection. Although at the further risk of being thought "cranky" and impracticable, I want to say, that, as an observer of the course of agriculture in the East and Southeast, and to some extent a participant in it—I have for many years been led to entertain the strong and growing belief that not only in the arid West, but in the more humid East, there is vast room and vast need for the wide introduction and use of irrigation.

This idea, belief, conviction has been largely confirmed by later residence in one of the more humid if not the most humid sections of the country, where I have seen at once the beneficial effects of a liberal supply of moisture, and, *even there also*, the ill effects of a failure in the supply of moisture at the proper time and according to the immediate needs of vegetation.

This whole subject is often tabooed and pooh poohed as unreasonable, visionary and unpracticable. It will not hurt to spend a little breath, thought and ink on it however.

As has been pointed out in your columns before this, *little* thought is given to the immensity of the losses to the farmer of the East in this way, *i. e.*, by general and partial drouth and deficiency of rain at the proper time and according to plant needs. I have had intelligent, conservative and able men engaged in farming to estimate the average loss or failure of production from *inequalities* of moisture supply alone to be at least 50 per cent. Meaning that production was *one-half* only from this cause, or would be doubled were it removed; and this, mind you would be nearly all profit. Some say the drouths alone cost this much—and in some sections of Virginia and Eastern North Carolina, this seems to me to have been true. But note that we say not "deficiency" "but inequality" of moisture supply, is the cause of this large loss—some times too much water, as well as often too little. It may be on the average as much of one as the other—and *still* we say that the first remedy for this—the evil of excess as well as of deficiency, of moisture is or would be *irrigation*, a more regular certain and liberal supply of water for crops, at the right season.

And why do we say this seemingly strange thing. It is because irrigation must go hand in hand with increased and thorough *drainage*, help to support, to cure and guard against its dangers. The two must and should walk hand in hand, or the one a little

precede the other, to ensure the success of each—and the two in combination, concert, unison will do wonders for us.

I grant that the deep and thorough tillage and deepening of the soil, previously advocated, would do much to obviate or prevent the ill effects of drouth—nay do wonders in this direction—and this is another and special reason for that very thing; but still I think that there would be abundant room if not great absolute need, for the use on a large scale of these two things—irrigation and drainage, in the agriculture of a large part of the East and Southeast, really in so-called humid or subhumid sections; because in them, through the rains falling from the heavens and the streams coursing along in the valleys, and the fertility springing up in their track Heaven—Nature—God—do not do all that is to be done—but only give the hint and point the way to the intelligence, the energy, the activity of man—the great imitator of and co-worker with his Maker.

West Virginia.

SENEX.

SAVING FARM MANURES.

Editor Southern Planter:

Now that feeding time has come again, the feeder should be careful to save all farm yard manure. This manure will often pay the labor bill for feeding the stock. There is scarcely any commercial fertilizer that will give the all-around good results that farm yard manure gives. This expense of commercial fertilizers to Virginia and Southern farmers is simply enormous. At the beginning of winter is a good time to plow to save some of this expense. As I travel over the country I see stables, barns and sheds built on hill sides and the manure pitched out and exposed to leaching rivers. Black streams of water trickle down the hill sides from such buildings, carrying off the farmers' money towards the sea. I see also the owners of those stables and barns buying commercial fertilizers in the fall and spring. He lets wash away richer fertilizer than he buys. We often see straw stacks rot down where they are not needed. If these were hauled out over thin places of the farm, better grass would grow. Old, half rotten straw is excellent to stop small gullies.

All such material should be saved during fall and winter to be spread out in the spring. If the farmer is going to let his manure be exposed to leaching rains during the winter, he had much better haul the manure direct to the fields as is made so that the land will catch and hold the fertilizing ingredients. It is true that some fertilizing ingredients will wash away when manures are spread on frozen ground,

but a much greater loss is sustained where the manure "fire-fang" and leaches out at the barns.

Each morning as the stalls are cleaned out, a convenient cart or wagon, or better a manure spreader, should be placed near by and the manure thrown into it. When a load is obtained, take it direct to the field and spread the manure out over the land and not place it in small piles. This method will save much handling and much fertility.

R. H. PRICE.

GOOD WOOD FOR WINTER.

Editor Southern Planter:

Now, that nearly all the farmers' crops are harvested and stored away for winter, there is one important crop the farmer most frequently puts off gathering to the last, and that is fire wood of good quality for winter. Many wood sheds I see almost empty during cold, rainy, bleak winter days. I also see many farmers out in the cold winter days hauling their winter's wood, and exposing themselves to cold and disagreeable conditions.

Green and sappy wood is heavy to handle and hard to burn. It takes time to "burn water." We don't need water in the range or stove to be made into steam before breakfast or dinner can be served. Wet wood tries the patience of the women folks and delays the farm hand from the fields.

Wood dries but little in winter. This is the last month during which it will partially season. Our saws and axes have been going for some time. Good stove wood for the winter is stacked under a shed and open fire place, other wood is corded up and partially seasoned near by.

The time that would have to be spent out in bad weather obtaining this wood can now be spent near the fire reading good literature. Time spent waiting for water to evaporate from wood by fire during a cold winter morning can be spent more pleasantly otherwise. We let the sun and wind take most of the water out of wood in the early fall.

After dry wood has been brought to the house it is another thing to keep it dry for winter use. I have a very cheap shed that has given satisfaction for three years. The cost was about seventy-five cents.

A fence punnel was taken for the north end and posts two feet higher, were set in the ground fifteen feet away for the South end. A heavy piece of lumber was placed on top of those posts and then the shed was covered with "slabs" sloping to the north. The "slabs" were obtained from a saw mill without cost. The sun shines in the south end where a man may stand sheltered from the weather and split up stove and kindling wood. This shed has been worth \$25.00 to me.

R. H. PRICE.

Montgomery Co., Va.

THE VALUE OF ALFALFA

Mr. Waldo F. Brown, writing in *The Country Gentleman*, says:

There is little doubt that during the next few years there will be an immense increase in the quantity of alfalfa grown. A farmer of my acquaintance who has a hundred-acre farm, and is making lambs a specialty, writes me that four years ago he sowed eleven acres of alfalfa. He has been feeding 500 lambs for the market each winter, and before raising the alfalfa had depended on clover hay, but says that a careful estimate for the four years shows that the eleven acres of alfalfa fed as many lambs as fifty acres of clover had. As it is an admirable hog feed, men on small farms will find that by growing alfalfa, mowing it and feeding it at the hog house, they can raise a very much larger number of hogs on their farms than when they depended, as most farmers do, on corn exclusively. Then if they will have sorghum planted early, so as to begin feeding it in August, the feeding of green foods can be extended until the winter sets in, and then the sorghum that has been allowed to mature, and been cut and cured, can be used to feed from that time until spring. There is no doubt that by following this method, pork can be produced much cheaper and the danger of cholera be largely avoided by this succulent, bulky food.

FEEDING HOGS FOR FAMILY MEAT.

Editor Southern Planter:

In the United States, the hog continues to be the great source from which comes the family meat. This is especially true on the farms and in rural towns. The hog furnishes us our lard, various kinds of cured hams, and breakfast bacon. But the hog is a costly animal when fattened almost exclusively on corn, which is most frequently the case in Virginia. We do not get the best bacon, by any means, when we fatten the hog, solely by heavy feeding of corn. The noted "Smithfield hams" are not produced in this way. A variety of food such as peas, clover, corn, &c., makes the best and cheapest meat. But in Southwest Virginia we have to learn this fact. The matter, however, that I want to protest against in this article is the close and filthy pens in which we too often see hogs fattened. Hogs fattened in such filthy places often are absolutely unfit to eat. At best, the hog has been regarded as an unclean animal though in this he is badly maligned. He is naturally clean about his bed and quarters. We should give the hog the cleanest surroundings we can, when preparing him to be served on our tables. Often times

I see hogs being fattened for family use while standing in mud, six inches deep and no clean dry bed to lie down upon. Such conditions not only give rise to disease, but are a disgrace to our civilization. Why such a practice is persisted in to so large an extent is beyond my comprehension. The best meat we grow, are our fine export steers, which cross the ocean to feed the English people. At home we too often eat bad hog meat and tough beef. Why not prepare now to make a change for the better, next year. I have grazed my hogs on clover and blue grass all summer and in the fall let them have the run of the orchard, to gather up undesirable fruit. Then I feed them corn for six weeks in a large clean, dry pen with a good, dry bed in it. I have no trouble in making the hogs fat. Even this method does not suit me, as I have too large a per cent. of fat to the lean. I need alfalfa and peas to produce more lean meat and to lessen the amount of costly corn fed to them. I find also that some breeds of hogs go entirely too much to fat for good family meat.

Montgomery Co., Va.

R. H. PRICE.

CANADA OR BLUE THISTLE.

Editor Southern Planter:

We have a troublesome plant of a prickly nature becoming right common in some parts of the country, commonly known as blue top or blue thistle. I have heard more than one man call it Canada thistle. Its proper English name is Viper's Bugloss (*Echium vulgare*). The blossoms are at first of a violet color, but change to deeper blue. There is nothing resembling a thistle about the plant. Now, the Canada, or cursed, thistle (*Cirsium arvense*) is a real thistle, shaped after the order of our common thistle, but having heads less than a half-inch in diameter. The blossoms are not blue but purple. It has not become common in our part of Virginia; I hope it never will.

H. E. BAILEY.

APPLES IN HENRICO COUNTY.

J. W. Krouse, of Ridge church, has brought us a fine sample of apples grown by him at Ridge church on trees planted 5 years ago. Among the varieties were: Winesap, Stayman, Mammoth Black Twig, Ben Davis, Improved Ben Davis, and two or three others. They were amongst the largest and best colored fruit we have ever seen and beautifully perfect. Some of the trees had as many as $2\frac{1}{2}$ bushels per tree. These were gathered 1st of October and were as firm on the 31st of the month as though fresh picked.

THE Southern Planter

PUBLISHED BY
THE SOUTHERN PLANTER PUBLISHING CO'Y.,

RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,

Editor and General Manager.

B. MORGAN SHEPHERD,
Business Manager.

B. W. RHOADS
Western Representative. 914 Schiller Bld'g.
CHICAGO, ILL.

ADVERTISING RATES
will be furnished on application.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticisms of Articles, Suggestions How to Improve THE SOUTHERN PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of post.

NO ANONYMOUS communications or enquiries will receive attention.

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PUBLISHER'S NOTES.

To Advertisers.

Be sure to send in your copy or instructions on or before the 25th of the month for the following month's issue. This is imperative.

OUR JANUARY ISSUE.

Our January issue will be our usual Holiday number.

We are exerting our best effort to make this number more attractive than any of its predecessors. It will be devoted largely to pure bred live stock and it should, therefore, be of special interest to every farmer in the South. While we will probably not have a copy for every farmer in this section, we are going to have a large edition for free distribution and we will be very pleased to send a copy to all interested parties.

We take this opportunity to urge our advertisers to send in their copy as soon as possible, not waiting until the 25th, when we are always so greatly crowded. This issue is going to be a splendid advertising medium and from present indications, the demand for space will be in excess of the supply. If we remember correctly, we had to omit six or seven pages of advertising from our last Holiday number. The old rule, "first come, first served", will have to apply in this case.

THE EVE BEFORE THANKS-GIVING.

"Bruddah Jinks," said one colored deacon to another, "I likes tu'key, I tell you, much bettah'n I does chicken. How 'bout you?"

"Bruddah Sam," said Deacon Jinks in a whisper, "I tell you: we'll jes' have ter be satesfied wid whutsomevah we finds in Marse John's henhouse ter-night."—Lippincott's.

Poultry Supplies.

If you want eggs during the winter, you must feed Animal Foods, such as

Meat Meal,

Beef Scraps,

Blood Meal,

Bone Meal,

to take the place of the insects, worms, etc., which poultry get in summer. OYSTER SHELLS and GRIT are also prime necessities.

Write for Prices and Catalogue telling what to use for Success and Profit with Poultry.

T. W. Wood & Sons, Seedsmen,
RICHMOND, - VIRGINIA.

We carry complete stocks of Cyphers' Incubators and Brooders, Poultry Foods, Egg Producers, Lice and Insect Powders, Poultry Remedies, etc.
Helpful Catalogue mailed free.



Black Hawk GRIST MILL

A hand mill for country, village and city housekeeping. Fresh corn meal, Graham, rye, flour, etc. Fast, easy grinder made to last. Weight 17 lbs. **\$3.00. PAID.** Soon pays for itself. You'll find a dozen uses for it. Grinds corn, wheat, rye, rice, apples, coffee, etc. fine or coarse. Just the thing for cracking grain for poultry. Black Hawk book FREE.

A. H. PATCH,
Mfr. of Black Mills and Gr. Mills. Sole Agents Wanted.
Clarksville, Tennessee.



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CLEAN SAFE, DURABLE AND COMFORTABLE.

WALLACE B. CRUM, FORESVILLE, CONN.
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BANK OF RICHMOND,

Main and Tenth Streets.

CAPITAL AND PROFITS, - - - \$1,134,938.14.

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Three per cent. Interest allowed in Savings Department,
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You Can Judge.

We'll send the Mill—we're not afraid. You try its speed, its strength, the kind of grinding.

Compare with others. No sale and no cost to you if you are not pleased with the **New Holland FEED MILL.**

The low priced mill that does every kind ear corn and grain grinding, coarse or fine. Makes excellent table meal. A rapid grinder and is strong and easy running. Several styles and sizes. With or without elevator and bagger. We also have the best and fastest cutting Wood Saw made. Send for free booklet.

New Holland Mch. Co., Box 153, New Holland, Pa.

TRY THIS MILL

10 Days Free.

I will send any responsible farmer one of

DITTO'S

Latest Double Cut, Triple-Geared Ball-Bearing

Feed Grinders

On Ten Days Trial—No Money In Advance.

If it does not grind at least $\frac{1}{2}$ more ear-corn or other grain than any other two horse sweep mill made, send it back at its expense. Don't miss this offer. Ball-bearing throughout. Only 10¢ ft. Light draft. Grinding rings never touch sweep. Light draft. Grinding rings never touch sweep. Each other—they last for years. Both grinders revolve, self-cleaning. Ask for new Catalogue.

G. M. Ditto, Box 48 Joliet, Ill.

A Great Saver of money, time and power, is what users say of the

Quaker City

MILLS

Sent on trial. Freight prepaid. Grind ear-corn and small grain, same time or separately. 40 years' experience has made us specialists. Write for free catalog.

The A. W. Straub Co., 827 Filbert St., Phila., Pa.
47-49 Canal St., Chicago, Ill.



SCIENTIFIC

RECOGNIZED EVERYWHERE AS THE BEST

POWER FEED MILLS

on earth. Write us for FREE 40-page Catalogue. Showing fifty styles and sizes.

THE FOOS MFG. CO., Springfield, Ohio

Grind a Bushel.

It does nearly the work of two. Finest fast work and all kinds of grinding in

STAR MILLS

Belts powers, simple and geared sweeps. Favorite for 25 years. If you want a feed grinder we want you to know about our price and our guarantee. Write us.

THE STAR MFG. CO., 66 Depot St., New Lexington, O.

WITH THE ADVERTISERS.

We invite the attention to the announcement of the Biltmore Farm in this issue.

The Diamond V. Ranch is offering some finely bred Angora Goats.

Poultrymen are invited to look up W. O. Rondabush's ad.

The Columbia Incubator Co starts this season's advertising with this issue.

R. B. Taylor is advertising Setters, Fox hounds, Beagles, Turkeys and Poultry. Look up his ad.

Shetland ponies and Angora goats can be had of Dr. W. C. Johnson.

The B. G. Pratt Co. is advertising "Scalecide" a preparation to control San Jose scale.

Hickory Milling Co. is advertising several thousand bushels of assorted cow peas.

Attention is invited to the ad. of the Belyeu Level Co. This firm offers at reasonable prices all kinds of levels for use in draining, ditching, surveying, etc.

Chattanooga Nurseries have an announcement in this issue, to which we ask attention.

South Side Mfg. Co. offers its fruit and vegetable carriers, as usual this season.

Slate Seed Co., the largest tobacco seed growers in the world have an ad. on another page, to which we invite attention.

Grove Farm, of which Mr. J. McK. Merryman is proprietor, offers some Guernseys and Berkshires in this issue.

Coe-Mortimer Co. have an attractive announcement of recent cargoes of Peruvian Guano. Refer to ad. and send for their free pamphlet "Plant Food."

Star Pea Huller is again offered to our readers this season; look up the ad.

R. A. Lancaster, Jr., offers to loan money on farms.

The old established house of J. M. Thorburn & Co. have a half page ad. in this issue, to which we invite attention.

Yager Linament, known to thousands of our readers, is advertising in an attractive style on another page.

The celebrated "Iron Age" implements will be offered to our readers as usual this year. Look up the announcement in another column.

Va.-Carolina Chemical Co. starts the season's advertising with an attractive ad. on another page.

Piedmont Business College would like to mail its catalogue to interested parties. Look up their advertisement.

Syracuse Chilled Plow Co. has its annual announcement in this issue.

Harrison Nurseries are naming low prices on fine nursery stock. See their ad. on the 4th cover page.

Brauer Chemical Co. have a proposition in which they would like to interest our readers. Look up the advertisement.

A Washing Machine FREE For 30 Days



Here's a chance for any woman to get away from the washboard forever. Simply drop us a postal card, asking for a Spotless Washer, and we will send you one, on trial, for 30 days. It will cost you only a penny. We even pay the freight. If you don't like it, if it doesn't do the wash quicker, better and with less labor than any other machine, sell us so, and we'll pay the freight back. If you do like it we will make terms of payment on such easy installments that anyone can buy it. There are no strings to this offer. It's a square deal. We make it, because we know that the

SPOTLESS WASHER

is the best machine made. It does most of the work itself. You only have to guide it, and you can do this sitting or standing. Operates in either direction. Made of finest selected Virginia White Cedar. Steam-tight—never comes loose. Mechanism all enclosed—no danger of hands or clothing being caught. Ball bearing—lightest running.

Send to-day for full particulars of this remarkable offer and our proposition.

SPOTLESS WASHING MACHINE CO., Inc.

Box 664 Z, Chicago, Ill.

99 Z, New York, N. Y. & Z, Richmond, Va.



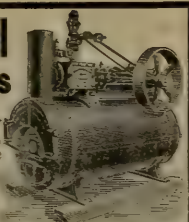
THE HESSLER still leads. Best made and most durable box on the market. Don't be deceived by pictures that look like THE HESSLER. To get the best insist on having the original genuine HESSLER BOX, not the imitation. Agents wanted in every town.

H. E. HESSLER CO., Syracuse, N. Y.
Factory 2.

We Will Give A RURAL MAIL BOX. The best and handiest Galvanized Steel Rural Mail Box made, to the first person sending subject of party, enclosing for positions for new Rural Route. Write today. KENTURY STAMPING CO., DEPT. 53, LOUISVILLE, KY.

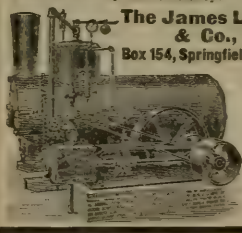
Leffel Engines

Simple, highly efficient, durable, are specially adapted to farm uses.



Widely known as the quickest, easiest steamers built. We make them Portable, Horizontal, Upright. Engines mounted on boilers or detached. No other type of power will give you such satisfactory service. We want to tell you the reasons why. We ask every Planter reader who wants a dependable power to write us today for our book, "Power Economy and Efficiency."

The James Leffel & Co.,
Box 154, Springfield, Ohio.



Our Gasoline Engines

Are the simplest built, having no valves. Will give more power for their size than any others built. Prices, 3 horse power, \$100; 6 H. P. double cylinder, \$300.

SOUTHERN MACHINE MANUFACTURING CO.,
731 E. Cary Street, Richmond, Va.

BOILERS-ENGINES

new and second hand, from 2 to 100 H. P. TRACTION ENGINES, \$225.00 each; 6 H. P. Vertical Engine and boiler, \$110.00; 3 H. P. Vertical Boiler and engine, \$90.00; 12 H. P. Vertical Boiler and engine, \$160.00; 22 inch Corn Burr, \$50.00; Corn crushers from \$10.00 to \$25.00; Gas and Gasoline Engines all sizes, new and second hand boilers from 2 to 100 H. P. New boilers of every description made to order. **CASEY MCH. CO.,** Springfield, Ohio.

STEAM ENGINE and BOILER COMBINED

(on skids) for sale: 6 h. p. Engine, 8 h. p. Boiler; in good working order with pump and injector complete, can be seen working at any time on notice; price cheap; owner does not need so much power. Apply to M. L. WEST, R. F. D. 5, Richmond, Va.

Farm Machinery

for sale. 1 Hercules 4-horse Sweep Power: 1 Dick Ensilage Cutter, 13 inch knives and shredders, 1 Mann Bone Cutter, 1 Matthews Hill or Drill Seed Sower, 1 complete Vaccinating outfit (for Cattle), all of the above are new, having been used but one season. E. M. BALL, Emory, Va.



Krauser's Liquid Extract of Smoke

Smokes most perfectly in a few hours. Made from the best of Helmsdale tobacco. Pleasant to smoke. No nicotine needed. Sent for 50¢. E. M. BALL, Emory, Va.

way of securing improvement is the barns in which the herds are kept. Too often these barns are found to be damp, dark, and poorly ventilated; the floors are a source of everlasting odors; the lack of sunlight promotes decomposition, and every particle of dust is loaded with germs which readily find their way into the milk. The foul odors present are absorbed by the milk before it can be removed from the premises. The cows are more susceptible to disease, and the place is entirely unfit for housing animals. There seems to be some excuse for this condition of things, as many, if not most, of these barns were built before the necessity of light and ventilation, good drainage, and sanitary arrangements for the interior were as well known as they are to-day. Most dairymen realize this fact and would make improvements, which are not necessarily expensive, if they knew how to go about it.

The Dairy Division receives many inquiries regarding the construction of new dairy barns as there seems to be a lack of available information on this matter that is reliable and practical. It is proposed to make working plans and to give specifications for material and manner of construction, and to make the work especially applicable to the dairyman who cannot afford an expensive structure and the services of an architect, and to place these in the hands of those who may desire them as soon as it can be done properly.

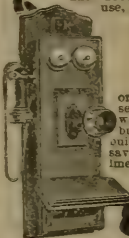
Many excellent barns have been built in different parts of the country; it is desirable to make a study of these, and in order to do so without unnecessary expenditure of money for travel, the Dairy Division desires that those who have built barns having especially good features in general arrangement of floors or in details of stalls, handy devices, etc., would write to the Dairy Division of this Bureau of their success, giving details as much as possible. Some of the best barns will be visited with a view to securing more complete details than can be given in a letter.

It is also desired that those who contemplate building new dairy barns or intend to rebuild their old barns with a view to making them modern and sanitary, will write to the Dairy Division and explain the details of size, cost, drainage, and slope of and, and exposure, purpose of barns, etc. It is not expected that the Division can furnish every applicant with a full set of drawings and specifications, but all such correspondence will be given careful attention and suggestions offered.

From this study of the needs of builders and from the successful work already done, it is expected to work out eventually a system of plans and specifications covering the general differences of climate, location, material, and cost that can be readily

Telephone Facts

Facts are what the farmer wants, whether buying a team or a telephone. If you want to know how others have built successful telephone lines write at once for our new free book "How the Telephone Helps the Farmer." It gives facts you ought to know about telephones for farm use, and about how to buy



STROMBERG-CARLSON TELEPHONES

or not you will be in possession of information which will enable you to buy the right telephone, and the right line and save unnecessary experimenting. We send it free.

Stromberg-Carlson Tel. Mfg. Co., Rochester, N. Y., Chicago, Ill.



Farm Phones

Have a telephone serviced? You want. Cost of instruments must compare to cost of labor and time and money saved.

AGENTS WANTED

Write for free book explaining how to build and operate telephone systems among your neighbors. Cadiz Electric Co., 55 C. C. Building, Cadiz, O.

FARM TELEPHONES

How to put them up—what they cost—why they save you money—all information and valuable book free. Write to J. Andrus & Sons, 924 W. Water St., Milwaukee, Wis.

BAGS

FOR EVERYTHING--NEW OR SECOND-HAND; SOLD OR RENTED. Write for prices.

RICHMOND BAG COMPANY, Richmond, Va.



BUY DIRECT

and save dealers profit. Vertical, Horizontal, and Portable Gasoline Engines. Pumping outfits and specialties. Our Engines are guaranteed to do all we claim for them or your money

refunded. Write to-day **BAUBOTH BROS.,** 50-56 Fisher St., Springfield, Ohio.

Built for Business

Farquhar engines and boilers are built for hard knocks and durability on the road as well as at work. They have every improvement that experience has shown to be of value. For general all-round service

Write for Catalogue of Engines, Boilers, Saw Mills and Pumps FREE.

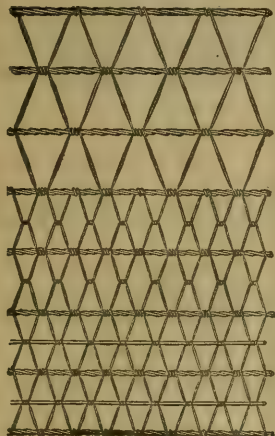
FARQUHAR ENGINES

and SAW MILLS

None so superior. A. B. FARQUHAR Co. Ltd. York, Pa.



ELLWOOD FENCE



We guarantee Ellwood fence because we know how it is made. All the resources of the greatest steel and wire mills in the world are brought to bear in getting as near perfection as it is possible.

We mine the ore from our own mines, make it into steel in our own mills, draw it into wire and weave it into the fence—all under our own eyes from the ground until is ready to staple to the posts.

The best known processes are employed. Deal in every place.

American Steel & Wire Co.,
Chicago New York Denver San Francisco

adapted to the needs of the greater number of dairymen.

Correspondence and suggestions bearing on this subject will be welcomed at the office of the Dairy Division, Washington, D. C.

THE INTERNATIONAL LIVE STOCK EXPOSITION TO BE HELD IN CHICAGO, DECEMBER 16 to 23.

The following is an interview with A. M. Soule, dean and director of Virginia Experiment Station, a Southern educator, and shows a far-reaching value to the International:

"The International Stock Exposition has come to be recognized as one of the great educational institutions of America. Certainly this is a strong statement, but when one considers the large number of animals annually brought together in its magnificent arena, the broad statement made above is fully justified. It is not an unusual sight at Chicago to see as many as 40 or 50 animals of a single breed or class in competition. To win in such company calls for the best efforts of the breeder and feeder, and naturally gives a stimulus to the producers of high-class animals that is having a far-reaching influence on the live stock industry of the country, and it is needless to add that it is this great industry that has done probably more than anything else to make the American farmer the most progressive and broad-gauged tiller of the soil the world has ever known.

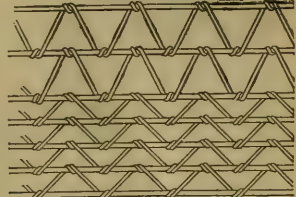
"The International Live Stock Exposition is an index of the progress of animal breeding in this country. Here are annually exhibited the best products of the mind and genius of the American breeder, concepts which have been developing during 20, and in some cases even 30 or 40 years. What a privilege it is to come in contact with these men; what an inspiration to study the results of their consistent and united effort. It is no wonder that students of the agricultural colleges far and near, with their instructors, flock to Chicago during the live stock exposition. Where else could they hope to find a school exemplifying as this does all the principles of animal breeding and nutrition. Yes, the International Live Stock Exposition is indeed a great school. Think of what it means to the hundreds of thousands of farmers who annually visit it and see what their brother farmers and stockmen have actually accomplished. Many a man has gotten his first true conception of what animal breeding and production means through a visit to the Exposition. It has thus become a great vitalizing and inspiring force to the live stock men of the whole country."

Plainfield, N. J., Oct. 31, 1905.

I enjoy the Southern Planter very much and consider it the only publication for Southern Farmers.

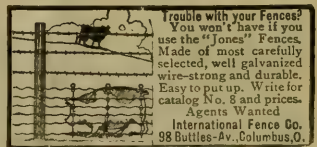
T. U. DUDLEY, JR.

THE FIRST Hartman Stockade Woven Wire Fence



Ever built was erected 17 years ago and is still in use as durable and strong as when first put up. The Hartman is a perfectly woven wire fence that is strong enough to keep in the maddest bull and fine enough to keep out the chickens. It is made of the best quality galvanized steel wire and contains much more material than fences more cheaply constructed. That's why it lasts so long. If your dealer doesn't handle it, write for catalogue and prices. Address:

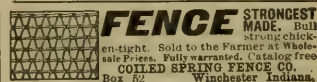
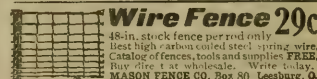
GLEN MFG. CO., 103 Mill St., Ellwood City, Pa.
Also Mrs. Hartman Steel Picket Fence, Hartman Flexible Wire Mats and Green Steel Mat.



WIRE—\$1.40 Per 100 Lbs.

Smooth galvanized wire, put up 100 lbs. to a bale, lengths running up to 250 ft. No. 14 gauge, per 100 lbs., \$1.40. Write for prices on other gauges. Fence staples, per 100 lbs., \$2.00. Wire nails, mixed in a keg, per 100 lbs., \$1.60. Barbed wire, per 100 lbs., \$1.50. Twisting, steel fence, etc., at low prices. Easy to put up. Write for catalogue No. 7, 166 on merchandise and supplies for Sheriffs and Receivers' sales.

CHICAGO HOUSE WRECKING CO., West 56th & Iron St., Chicago



\$96 A MONTH salary for a man with rig to introduce our Stock and Poultry Remedies. This Co. means business and can furnish best references. Send for Contract. Dept. AT, ROYAL CO-OP. MFG. CO., Indianapolis, Ind.

Clark's Tools for Large Hay Crops

Clark's Rev. Disc Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the subsoil water. It is an excellent machine for covering in sugar cane. Strength guaranteed. Can plow a newly cut forest, stump, bush, or bog land, leaves land true, clean for any crop.

Clark's Double Action Cutaway Harrow moves 15,000 tons of earth in a day.

Send for Circulars.

Clark's Rev. Sulky Disc Plow

Made single or double. One or two furrows five to ten inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar plow made. When Clark's grass tools are used as directed in his grass circular, we, the C. H. Co., guarantee them to kill wild mustard, charlock, hardhack, sunflower, milkweed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seeding to grass.

THE CUTAWAY HARROW CO.,
Hingham, Ct., U. S. A.

SAWS

ANY WOOD IN ANY POSITION ON ANY GROUND 4 in to 6 ft. Through 12 in with 8

1 Man Sawing Machine Beats 2 Cross-cut Saws 8 to 9 cords daily is the usual average for one man.

NO RUBBING. No Backsaw. Weighs only 41 lbs. EASILY GUARANTEED. BARK DOWN TREES.

Our 1906 Model Machine saws faster, runs easier and will last longer than ever. Adjusted in a minute to suit a 12-year-old log or the strongest log. Send for catalog showing latest improvements. First order gets agency. Fording Sawing Mach. Co., 158 E. Harrison St., Chicago, Ill.

NEW HOLLAND WOOD SAW

Great thing for home work, a money maker for jobbers. Very speedy and durable. Saws wood, poles, posts, rips boards, pales, lath, etc. Three sizes. We make several styles and sizes Feed Mills. Write for free booklet. New Holland Mach. Co., Box 153, New Holland, Pa.

This "Williams" Pump FREE.

To introduce our patented pumps in every county, we will send one pump FREE to the first to write accepting our special offer. Write today! A Wooden Pump made of iron. Just the handle to remove sucker-leather. Stock made of steel, has a adjustable, brass

"No Tris" drain-cock prevents freezing. GUARANTEED. All repairs done aboveground.

"Williams" Pump Co., 467 Harmon St., Indianapolis, Ind.

PRINTING DONE

at the following prices:

Envelopes	100.	500.	1,000.
Letter Heads	30c.	\$1.00	\$1.50
Note Heads	40c.	1.25	2.00
Bill Heads	35c.	1.10	1.75
Cards	35c.	1.10	1.75

Send cash with order.
STAR PRINTING CO., Millboro Springs, Va.

VENEERED TREE PROTECTORS.

Our readers will notice an advertisement of the HART PIONEER NURSERIES, of Ft. Scott, Kans., running in this paper, regarding an improved Veneered "Tree Protector," and judging from the high class of testimonials that this firm furnishes, they evidently are a good thing, and will do all that they claim of them, such as protecting trees from mice, borers, rabbits, hot winds, sun scald, etc.

We notice testimonials from some of the largest orchardists in the country, who are using them, also from leading horticulturists and secretaries of many horticultural societies, advocating the Protectors.

If any of our readers have trees or shrubs to protect, they will do well to correspond with the above firm, and get their circulars and samples.

FOURTH ANNUAL CONVENTION

Of the National Nut-Growers Association.

Annual Convention of this Association will be held at Dallas, Texas, December 6th, 7th and 8th, 1905.

All members who can arrange to be present, are expected to attend. All others who now are, or expect to become interested in the nut-growing industry are cordially invited.

A special invitation is extended to the ladies, as many of them find pleasure and profit in nut-growing.

The program as thus far arranged, assures a most interesting and profitable meeting, the subjects selected for discussion being pertinent and practical, and the speakers men of wide experience and marked ability.

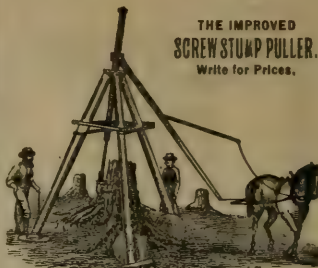
G. M. BACON, President,
J. F. WILSON, Secretary.

Our readers are all familiar with the advertisement of the Page Woven Fence Company, Adrian, Michigan, and undoubtedly know that they claim to use a better quality of wire—a basic, open-hearth spring steel wire, having double the tensile strength of common fence wire of the same size, and not only a stronger, but also a springier wire—a wire that makes good springs. This wire is known as Page-Wire.

The Page Fence Company have just issued a souvenir edition of their house-organ, the "Page Fence Age," which gives a detailed, illustrated description of their process for manufacturing Page-Wire and tells why it is stronger and springier. Every fence buyer should get a copy. It is free. Drop them a postal card asking for "A Trip Through Our Mills."

A Scotchman whose tongue proclaimed his origin, asked an Irishman where he came from. "I was born in Ireland, thank God," came the prompt answer. "Aye," said the Scotchman, dryly. "It's right to be thankful for sma' mercies."

THE IMPROVED SCREW STUMP PULLER. Write for Prices.



Chamberlin M'g Co., Olean, N. Y., U. S. A.

HERCULES Stump Puller



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 feet without moving or changing machine. Strongest, most rapid working and best made.

HERCULES MFG. CO.,
413 17th St., Centerville, Iowa.

The Monarch Stump Puller.

The best on earth; you make no mistake in buying of a man of 5 years' experience in pulling stumps. We set up the Puller and guarantee satisfaction before we want your money. 5 sizes.

Write for catalogue and prices.
JOS. W. RITCHIE, State Agent, R. F. D. No. 39, Groton, Va.

Monarch Stump Puller.

Will pull stumps seven feet in diameter. Guaranteed for 12 mos. and a strain of \$50,000 pounds. Catalogue and discounts. Address, MONARCH GRUBBER CO., LONE TREE, IOWA.



THE GENUINE SMITH STUMP PULLERS
W. SMITH GRUBBER CO.
LACROSSE, WIS. U.S.A.
CATALOG FREE

FRAZER Axle Grease

Best in the world.
Its wearing qualities are unsurpassed, actually outlasting 5 bxs. any other brand. Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.



THE MAJESTIC

ROTARY WASHER
A HOUSEHOLD NECESSITY.

BECAUSE:
It is the best washer on earth.
It's Ball-bearing, and almost runs itself.
It is made of white cedar with electrically welded hoops sunk in the wood.
We are the largest manufacturers of woodenware in the World, and can make the BEST CHEAPEST.
Write for Catalogue

The Richmond Cedar Works,
Richmond, Va.

SAN JOSE SCALE

and other INSECTS killed by

GOOD'S

Caustic Potash Whale-Oil Soap No. 2.
Endorsed by U. S. Dept. of Agri. and State Experiment Stations. This soap is a Fertilizer as well as an insecticide. 60lb. kegs, \$2.50; 100lb. kegs, \$4.50; half barrel 20lb. 40c per lb.; barrel, \$25.10, 91c. Send for Booklet, JAMES GOOD, Original Maker, 959-41 N. Front Street, Philadelphia, Pa.

PRATT'S "SCALECIDE" Soluble Petroleum

If YOU will guarantee to cover the

SAN JOSE SCALE

WE will guarantee to kill it without injury to the tree. Can we do any more? Yes, lowest cost. Price in bbls, 80c. per gal.; 10 gal. cans, \$6; 5 gal. cans, \$3.25; 1 gal. cans, \$1.75. One gal. makes 21 gals. spray by simply adding water. For sample and circular, address
B. G. PRATT CO., 11 Broadway, New York.

FUMA kills Prairie Dogs, Woodchucks, Gophers, and Grain Insects. "The wheels of the Gods grind slow but exceedingly small." So the weevil, but you can stop their grind with
Fuma Carbon Bisulphide as others are doing.
EDWARD R. TAYLOR, Penn Yan, N. Y.

Save The Posts

Old field pine made to last longer than cedar or locust by creosoting with dead oil of coal tar. The creosoting of lumber makes it practically indestructible, stops all rot and is absolute death to all insects. Write for prices to the NORFOLK CREOSOTING CO., Norfolk, Va."

Mention THE SOUTHERN PLANTER in writing.

OLD INDIAN FASHIONS.

The American Indians used to grind their corn by pounding it between two stones. This work fell to the women. An up-to-date farmer would laugh at such an old-fashioned mill—would not have such primitive methods on his farm. Indians had no way of skimming their milk except to let it stand in something until what cream would rise came to the top. The women did the skimming as well as the milking. Of course, they lost sometimes as much as half the cream by such an unscientific method.

Some of the very farmers and dairymen who would laugh at an Indian mill are skimming their milk—and losing half their cream—just as the Indians did. Modern methods of skimming are as far ahead of the old method as modern mills are ahead of Indian grinding stones. The up-to-date skimming machine is the Sharpless Tubular Cream Separator. It often doubles your dairy profits—skims the milk as soon as drawn from the cow—leaves fresh warm skim milk for young stock—requires that only the cream be put away. In use from Maine to California—and far ahead of pans or cans. Ask The Sharpless Separator Co. for their plainly written, fully illustrated catalog No. 290. Address them at West Chester, Pa., or Chicago, Ill., or Toronto, Can. They have large offices at each place.

LISTEN TO THIS.

(From the Topeka Capital.)

"News comes from Southern Kansas that a boy climbed a cornstalk to see how the sky and clouds looked and that now the stalk is growing faster than the boy can climb down. The boy is clear out of sight. Three men have taken the contract for cutting down the stalk with axes to save the boy a horrible death by starving, but the stalk grows so rapidly that they can't hit twice in the same place. The boy is living on green corn alone and has already thrown down over four bushels of cobs. Even if the corn holds out there is still danger that the boy will reach a height where he will be frozen to death. There is some talk of attempting his rescue with a balloon.

A farmer engaged in a county court case, the judge of which was a very sincere man, suggested to his lawyer that things might be smoothed by sending the judge a couple of nice, young ducks. "Send the ducks and you will be sure to lose your case," exclaimed the lawyer. The suit was fought, and the owner of the ducks won. "I sent the judge the ducks," he afterwards explained complacently to the lawyer. "Sent the ducks, and you have won your case!" was the astonished reply. "Yes," he replied, "but recollecting what you said, I put the other man's name to them."—The Argus.

GOOD, big "mealy" potatoes can not be produced without a liberal amount of **POTASH** in the fertilizer—not less than ten per cent. It must be in the form of Sulphate of Potash of highest quality.

"Plant Food" and "Truck Farming" are two practical books which tell of the successful growing of potatoes and the other garden truck—sent free to those who write for them.

Address, GERMAN KALI WORKS,
New York—93 Nassau Street, or
Atlanta, Ga.—22½ So. Broad Street.

FERTILIZER

That Is Some Account.



PERUVIAN GUANO,

Pure from Peru, S. A.

ANALYSES:

Chincha:	9.50 per cent.	Lime:	18.50 per cent.
20.50 per cent.	Bone Phos.	50.00 per cent.	
8.30 per cent.	Ammonia	3.60 per cent.	
2.00 per cent.	Potash	4.25 per cent.	
9.00 per cent.	Phos. Acid	25.00 per cent.	
	Organic Matter and Ammonia Salts		
28.00 per cent.		13.00 per cent.	

Inquire of your DEALER; if he has not got it, write to

OLIVER SMITH COMPANY,
Wilmington, N. C.

SHIPMENTS FROM { NORFOLK, WILMINGTON.

AGRICULTURAL and BUILDERS' LIME

Quality and prices right. FELLSWORTH LIME WORKS, Staunton, Va.

WANTED

SECOND HAND BAGS

ANY KIND—ANY QUANTITY—ANY WHERE,
I Pay Freight. Write for Prices.
GEO. T. KING, Richmond, Va.

Northern Virginia Farms

Of every class, adapted to Grain, Fruit, Dairy and Blue Grass, within five to thirty miles of Washington, D. C.

No. 16.—130 acres; 20 in timber, balance cleared. Good land. In good condition. Comfortable 4 room house. Fine water. Five miles from station. Fronts on Pike. Price, \$20 per acre.

No. 20.—Contains 130 acres, 6 miles from R. R. Near McAdams Pike, 75 acres cleared, 55 acres in timber, land is a little rolling, a good quality of red clay, a good young orchard, just beginning to bear. Farm watered by stream and well. Comfortable 4 room house, new granary, stable for 4 horses, 1-4 mile to school, 1 mile to Stores, church, P. O., and shops, situated in a good neighborhood. Price \$1,400, on easy terms.

No. 31.—26 acres; 10 miles from Washington, D. C.; 2 miles from an electric and steam railroad. Thirteen room house in nice shaded lawn, 2 cellars, well at house. Nice orchard, in full bearing. All necessary out-buildings in good repair. Price, \$3,500.

No. 43.—30 acres; an elegant brown stone house, with 6 rooms, 2 porches. Three acres young orchard, in full bearing. All necessary out-buildings, in good repair. A large stone mill building, with 2 sets of corn burrs, has 20 foot water fall. Situated in a thickly settled and refined neighborhood. Mill is in thorough repair and doing a good local business. Price, \$3,500.

No. 62.—635 acres excellent grazing, cleared land, well set in grass, and a little rolling. 250 acres fine white oak timber, balance of land cleared. Nine room house, bank barn 20x40, sheep house 20x50, and all the usual farm houses, all in good repair. Large orchard of all kinds of fruit, in full bearing. Farm watered by springs and streams; water in all the fields; land is all well fenced; has now about 40 large cattle, in addition to sheep, horses and colts. Price, \$16.00 per acre. Easy terms.

No. 63.—516 acres, natural Blue Grass land; well fenced; elegant well water. Good 5 room house, with all the necessary small farm houses in good repair; good sheep barn 20x40. Thrifty young orchard of apples, peaches, pears and cherries. Land is all in grass, except about 40 acres, there is in corn now. Close to schools, church, mill and post office. Four miles from railroad. This farm usually sends off from forty to fifty export cattle in September. It is located in a beautiful section of the county of Loudoun, 25 miles from Washington, D. C. Price, \$15.00 per acre; one-third cash.

No. 66.—Large merchant mill, new process, all modern improved machinery, cost about \$14,000, situated in one of the finest grain sections of Northern Virginia, two and one-half miles from railroad. Ample water power in ordinary seasons, but fitted up with a splendid boiler and engine to aid power in the summer months. For sale on a small estate. Write for full description. Price, \$7,500.00, on very easy terms.

Write for full information and price list of other farms.

No. 71.—280 acres; a fine body of white oak timber. This land is just rolling enough to drain well; it is a fine quality of land and is 5 miles from the R. R. This timber is estimated to cut from two to three thousand feet of lumber to the acre. The land alone is worth more than I am asking for both, and a quick business man can buy this tract and make on the clear either the land or the timber. It will not be on the market long at the price I am asking. Price, \$15 per acre.

No. 75.—Contains 60 acres of Good, land Fronting on McAdams Pike, Land a little rolling, but considered Level, well fenced, about 10 acres in timber, 23 Miles from Washington. Thrifty young orchard, apples, peach and pear, good 6 room house, Stable long, other out houses all in good repair, 1-4 mile from store, P. O., mill, and shops, in elegant neighborhood. Price \$1,250.

W. E. MILLER, Herndon, Va.

HINTS BY MAY MANTON.

Cape effects of all sorts are greatly in vogue this season and are very apt to be becoming while they are graceful and eminently attractive. Illustrated is a waist which includes one of quite novel sort and that also shows an attractive chemisette. In this case taffeta is trimmed with silk banding and combined with lace over chiffon, there being groups of handsome buttons at the front, but the waist suits both the gown and the separate blouse equally well and is consequently adapted to almost all seasonable materials. Taffeta and louisine are having great vogue, but there are also a number of pretty soft wools which are usually in fashion, such as cashmere, henrietta and veiling.



5193 Waist with Cape, 32 to 40 bust.

The pattern 5193 is cut in sizes for a 32, 34, 36, 38 and 40 inches bust measure and itself consists of fronts and back with the chemisette and the cape. The closing of the waist is made invisibly at the left side beneath the simulated box plait while that of the chemisette is made at the left shoulder seam. The sleeves are attractive yet simple ones that give a cuff effect, while in reality they are all in one.

The quantity of material required for the medium size is 4 1/4 yards 21, 4 yards 27 or 2 1/2 yards 44 inches wide with 3/4 yard of all-over lace and 4 yards of banding.

Circular skirts made full so that they fall in abundant folds and ripples are among the smartest of all models and are trimmed in various ways. This one is made of reseda broadcloth stitched with corticeil silk, and shows a seam at the centre front with inverted plaits at the back, but the mod-

SPLENDID FARM

AT LOW FIGURES

1,000 acres, well, improved, 5 miles from station, in fine section, \$20,000.

Free, list of 150 select properties. Describe your wants.

H. W. Hilleary & Co.

OFFICES:

Charlottesville, Va.; Warrenton, Va.;
Staunton, Va.

SEND FOR

OUR NEW LIST OF CHOICE BARGAINS IN FARMS, TOWN PROPERTIES, TIMBER LANDS, ETC. We can offer you great bargains in real estate situated in ROCKBRIDGE, BATH AND AUGUSTA COUNTIES. All information cheerfully and promptly answered. Livory, etc., free to those who mean business. J. W. GUINN, Goshen, Va.



Old Virginia Farms

Good Lands, Low Prices, Mild Climate. Send for our FREE ILLUSTRATED CATALOGUE. Largest list of Farms for sale in the State. Let us tell you WHY this is the country for the Northern Farmer. We want to hear from every man who desires to better his condition.

CASSELMAN & CO.

Richmond, Virginia

VA. LANDS and WATERS

Our 10c. map, in four colors, shows a half million acres of the most desirable lands and waters in the United States. Our papers, which we send with the map, are full of Facts, Figures and Features, respecting the Eastern portion of Virginia, Near-the-Sea, of interest, use and benefit to the Home, Health, and Wealth seekers of the North, East and West, who want to secure homes or investments in a mild and delightful climate. Send 10c. in stamps for copy of map and papers. A. JEFFERS, Norfolk, Va.

Home Seekers and Speculators.

I am in position to show you the largest list of properties you can find in Northern Virginia, consisting of STOCK, GRAIN, DAIRY, FRUIT, POULTRY, TRUCK, and BLUE GRASS farms. VILLAGE HOUSES and BUSINESS SITES all within 1 to 2 hours of the National Capital. For free catalogue and full particulars, call on or address W. H. TAYLOR, Herndon, Va.

Virginia Farms

MOST SELECT LIST, and in all sections of the State.

FREE CATALOGUE.

R. B. CHAFFIN & CO., Inc.

Richmond, Va.

Mill Property FOR SALE.

A 50-barrel roller mill, corn mill and saw-mill; a 50-horse power Lefell engine and boiler; good water power; pond about three-fourths of a mile long, with rock dam; 174 acres of land, mostly in woods; a 2-mile Page wire fence surrounds the pond; new fence; some good timber; about 8,000 cords wood could be gotten off the land. Situation of mill is beautiful. In good corn and wheat section; six miles from, and telephone to, Reidsville—6,000 people; on good public road, kept up by the county; mill now doing business and is in good repair. Good schools and churches. A 5-room house; cabin, four rooms; two stables; three corn cribs; a large dressing room; a dry house; a one-room brick house near mill for customers. Will be sold at a bargain. Mean business. J. W. Bethell, Reidsville, N. C.

VIRGINIA ..AND.. THE PLACE ...TO... FIND THE BEST HOMES

Where Health, Climate, Soil, Location and markets are unsurpassed. Any size, place and price to suit the buyer of a stock, truck, fruit, poultry or fish and oyster farm. James River Valley Colonization Co. offers superior advantages to land buyers. Write for free 32 P. pamphlet giving full particulars.

W. A. PARSONS,
C. & O, Main St. Depot. - - Richmond, Va.
ESTABLISHED 1876.

Northern Virginia.

Grain, Fruit, Dairy and Blue Grass Farms of every class within one hour of Washington, D. C.

LOUDOUN COUNTY
Farms a Specialty
Catalogue on application.
P. B. BUELL & SON,
Real Estate Brokers,
Herdon, Fairfax Co., Va.

To Exchange

56 acres of fine Timberland in North Carolina, for sawed lumber. HALL & JEHNE, Farmville, Va.

A VALUABLE

Stock Farm

of 1,000 acres, half in valuable timber; 90 head of high bred cattle, must be sold regardless of price on account of poor health; convenient to river and R. R.; nicely located, annual pasture.

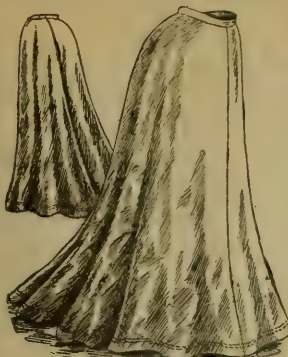
W. H. Bufkin, Elizabeth City, N. C.

FINE FARMS in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address:
ALEMABLE IMMIGRATION CO.
SAM'L B. Woods, Pres. Charlottesville, Va.

FOR LOANS ON VIRGINIA FARMS

APPLY TO

R. A. LANCASTER, Jr. Richmond, Va



4896 Circular Skirt, 22 to 30 waist.
To be made with or without seam in front and with inverted plait and or habit back.

el allows of making without a seam at the front and with the habit back whenever preferred. All seasonable materials are appropriate.

The skirt consists of skirt and belt only and is fitted over the hips by means of short darts. The closing is made invisibly at the back whether the plaits are used or are not.

The quantity of material required for the medium size is 8 yards 27 inches wide, 4 1/4 yards 44 inches wide or 4 yards 52 inches wide, or 3/4 yard less 52 inches wide, when made without the seam at the front.

The pattern 4896 is cut in sizes for a 22, 24, 26, 28 and 30 inch waist measure.

We can furnish these patterns at 10 cents each. When ordering, simply give the number and size thus: 4896-22. Pattern will arrive in a week after ordering.

THE SOUTHERN PLANTER.

Richmond, Va.

NO REASON TO COMPLAIN.

(From the San Francisco Chronicle.)
"The Independence of the American waiter is a great and glorious thing," said A. F. D. Stall, of Australia. "He has been roaming about in this broad Western Hemisphere, breathing the air of freedom, liberty and independence until he is saturated with it. In Chicago the other day I said to a waiter in a cafe:

"Waiter, is this a pork chop or a mutton chop?"

"Can't you tell by the taste?" asked the waiter, marvellously interested in the identity of the chop.

"I certainly cannot," I replied.

"Then what difference does it make?" replied the waiter."

Tinkling, Va., Oct. 27, 1905.

The Southern Planter is a fine paper and I like it fine.

A. WINGOLD.



VIRGINIA FARMS As low as \$5 per Acre

with improvements. Much land now being worked has paid a profit greater than the purchase price the first year. Long Summers, mild Winters. Best shipping facilities to great eastern markets at lowest rates. Best church, school and social advantages. For list of farms, excursion rates, and what others have accomplished, write to-day to
F. H. LABAUME, Agr. and Ind. Agr.,
Roanoke, Va., Dept. Y.



"In the Green Fields of Virginia."

Homes for ALL; Health for ALL; Happiness and Independence for ALL. ALL sizes of FARMS at corresponding prices, but ALL reasonable.

MACON & CO., Orange, Va.

VIRGINIA FARMS

33 PER ACRE AND UPWARDS.

EASY PAYMENTS. CATALOGUE FREE.

GEO. E. CRAWFORD & CO., Richmond, Va.

Established 1876.

Productive Farms.

Hanover county, between the mountains and Tidewater. Land and seasons conducive to successful farming. FRANK H. COX, Ashland, Va.

Virginia Farm Agency.

If you want to buy, sell, rent or exchange a farm or a suburban home, see
J. R. HOCKADAY & CO., 10th & Main Sts., Richmond, Va.

Virginia Farms.

Farms of any size with improvements.

Prices in reach of all. For list,

PORTER & GATES, Louisa, Va.

Wanted to Rent

a good farm, in good condition, for a term of years, prefer stock and implements furnished; correspondence solicited; best of references and recommendations.

R. B. LEATHERMAN, Winchester, Va.

FOR LOANS ON VIRGINIA FARMS

APPLY TO

R. A. LANCASTER, Jr. Richmond, Va

WANTED TO RENT

by a western man, a grain and stock farm of 200 acres or more, with teams, farm implements, etc., furnished. Have farmed and handled stock all my life.

Middle or Eastern Va. preferred. Address, M. D. SPENCE, box 508, Roanoke, Va.



Young Lady, Learn

Stenography & Bookkeeping.
There's a place in the commercial world for you with a good, sturdy and really advancement if you are really anxious to succeed and do your best.

Lady graduates of this college occupy positions of trust with the largest mercantile houses. Will be glad to have your name put for a catalogue. Either pace.

MASSEY BUSINESS COLLEGES.

BIRMINGHAM, ALA. HOUSTON, TEX.
MONTGOMERY, ALA. RICHMOND, VA.
COLUMBUS, GA. JACKSONVILLE, FLA.

WE TAKE OFF OUR HAT.

Editor, Southern Planter:

You are undoubtedly so used to receiving flattering letters from the readers of the Southern Planter that you can stand one more without danger of spoiling you.

I have been a reader of your paper for nearly seven years now. I have seen and read almost all the agricultural papers in the United States, and I can truthfully say that I consider the Southern Planter by far the best monthly paper. The size and the arrangement of contents are admirable. While the contributions from outside writers are of superior quality, I consider your "Farm Management" and Editorials, not only the best part of your paper but of any agricultural paper. They are real gems.

You give the most valuable information and instruction in such simple language that any farmer with but a common school education can take full advantage of everything, and you manage somehow to arrange the whole in such a manner that it is a positive pleasure and not work to read what you have to say. Another good point of your Editorials is, that they can be read and read again without losing their charms.

(Prof.) F. A. WIEHE,
Raleigh, N. C.

Professor Blackie used to form a very picturesque feature in the Edinburgh streets. He was a cheery old patriarch, with handsome features and hair falling in ringlets about his shoulders. No one who had seen him could possibly forget him.

One day he was accosted by a very dirty little bootblack, with his "Shine your boots, sir?"

Blackie was impressed with the filthiness of the boy's face.

"I don't want a shine, my lad," said he. "But if you'll go and wash your face I'll give you a sixpence."

"A' richt, sir," was the lad's reply. Then he went over to a neighboring fountain and made his ablutions. Returning, he held out his hand for the money.

"Well, my lad," said the professor, "you have earned your sixpence. Here it is."

"I dinna want it, auld chap," returned the boy, with a lordly air. "Ye can keep it and get yer hair cut."

The editor of the Rural New Yorker has found another method of telling of the hen's usefulness. A bushel of wheat worth 90 cents will feed a hen for 300 days. If she lays a hundred eggs worth two cents each she makes the wheat worth \$2. This amount will haul a ton of freight 250 miles or one passenger eighty miles. She gives the land 25 cents' worth of fertilizer for the next crop and then makes a toothsome dinner.

Make Your Idle Money Earn You Interest.

Write the **FIRST NATIONAL BANK** of **RICHMOND, VIRGINIA** for information concerning its certificate of deposit, so arranged that one percent. may be collected every **FOUR MONTHS** through your nearest bank or store.

Our experience proves this form for savings to be the most satisfactory plan yet devised for deposits of \$100.00 or more.

Our Capital and Surplus is

ONE MILLION DOLLARS.

JOHN B. FURCELL, President.

JMO. M. MILLER, Jr., Vice-Pres. & Cashier.

CHAS. R. BURNETT, Assistant Cashier.

J. C. JOPLIN, Assistant Cashier

Position Wanted

As manager of first class Stock farm for 1906, by an experienced young married man. Best of references.

WM. LEA, Marietta, Ga.

MEN WANTED.

One married and one single to work Dairy Farm; good house and garden furnished if married; write stating price expected and give references.—W. B. GATES, Rice Dep., Pr. Edw. Co., Va.

POSITION WANTED

by young married man on gentleman's place as working manager; fully understands farm work and gardening in all its branches, also all kinds of repair work on buildings, and machinery, running and taking care of steam and gasoline engines, steam fitting, plumbing and all kind of work around a place; best of reference.—Address: PETE, care Southern Planter.

POSITION WANTED

by young single man as Superintendent of large up-to-date farm. Have had good education, experience of seven years with stock and management of labor on farm. Have also had a good mechanical training. Can give best Virginia references. Address: SUPERINTENDENT, in care of Southern Planter, Richmond, Va.

WANTED

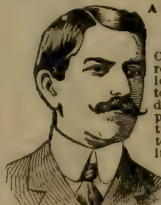
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in all portions of the United States. No collection. No Charge. Agents wanted everywhere. 25 year's experience—PALMORE'S COLLECTION AGENCY, 511 Main St., Richmond, Va.

A GREAT DISCOVERY.

DROPSY

CURED with vegetable remedies; entirely harmless; removes all symptoms of dropsy in 8 to 10 days; 30 to 60 days effects permanent cure. Trial treatment furnished free to every sufferer; nothing farther. For circulars, testimonials and free treatment, write Dr. H. H. Grea's Sons, Box H, Atlanta, Ga.



FARMERS Insure Your Buildings.

LIVE STOCK PRODUCE, &c.

Write for booklet giving plan and explaining how you can become a member of the . . .

Farmers Mutual Benefit Ass'n.

thus securing cheap fire protection. Property insured, \$400,000; average cost per \$1,000 per year, \$1.50. Memberships and risks limited to Eastern Va.

CHAS. N. FRIEND, Gen. Agent, Virginia Division, CHESTER, VA.

ORGANIZED JANUARY 9, 1899.

MONEY SAVED

DO YOU EVER INTEND TO BUY A PIANO? If so, read this and buy now. Never before have you had as fine an opportunity to buy a fine piano at such a great sacrifice of price. We are to take inventory and must reduce our immense stock. Here is your life's chance. Look at these prices:

A fine \$500 upright.....	\$345
A fine \$450 upright.....	\$21.50
A fine \$400 upright.....	\$25
A fine \$350 upright.....	\$25

Square pianos at your own prices from \$30 to \$100. Organs from \$30 to \$55. Write us to-day for full information and catalogue.

WALTER D. MOSES & CO.,

108 E. Broad street, Richmond, Va.

ESTABLISHED 1870.

Oldest Music House in Virginia.



An Eczema Hand

should not be covered by a glove. A fresh antiseptic bandage every day after applying Heiskell's Ointment is all that is needed to cure the trouble, no matter how old or stubborn it may be.

Heiskell's Ointment

goes right to the spot. It cools the skin, stops the burning and itching, and cures. There is no case too obstinate. All skin diseases yield to its magical influence. Used successfully for half a century.

In all cases it is best to bathe the part affected with Heiskell's Medicated Soap before applying the Ointment. To make the blood pure and clean up the liver take Heiskell's Blood and Liver Pills.

Ointment 50c. a box : Soap 25c. a cake; Pills 25c. a box. Sold by all druggists, or sent by mail.

JOHNSTON, HOLLOWAY & CO.,
531 Commerce St., Philadelphia, Pa.

Tetter Entirely Cured.

M. A. Butler, Fort Freemont, S. C., writes on Oct. 27:

"I was afflicted with the worst case of tetter known, a sight to look at. I used everything on the market without relief until I found your wonderful 'Tetterine.' Now I am entirely cured." Send 50c. if your druggist doesn't have it, to J. T. Shuptrine, Savannah, Ga.

Bathe with Tetterine Soap, 25c.

THE KEELEY INSTITUTE
GREENSBORO, N.C.

For the treatment of THE LIQUOR, OPIUM, MORPHINE and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

OPIUM

and Whiskary Habits cured at home without pain. Book of particulars sent FREE. E. M. Woolley, M.D., Atlanta, Ga., 103 N. Pryor St.

LIQUID SMOKE.

A Preparation Made from Hickory Wood for Smoking All Kinds of Meats.

E. Krauser Bro., of Milton, Pa., are the manufacturers of this wonderful preparation which has taken the place of the old-fashioned process of smoking meats in a smoke-house. It is far cleaner and more convenient, and it saves a lot of time and work. It not only perfectly cures meat, but gives it a sweetness and delicious flavor that is peculiarly its own and perfectly wholesome. All that is necessary is to put it on with a brush; only takes a few minutes and there's no opportunity for insects to contaminate the meat.

Any one writing to the manufacturers will receive circulars fully explaining the merits of the process.

A few years ago the plan of selling goods direct to the user at wholesale prices, freight prepaid, was not thought of. One of the first large concerns to adopt this plan was the Coiled Spring Fence Company, of Winchester, Ind. Ten years ago they started with a small capital, small factory and small business. Now they employ 52 people in their office, 150 people in the fence factory and 200 people in their wire mill. They sell fence on 30 days trial, freight charges prepaid. It can be returned if not satisfactory. They say they can save money on fence. It would be well for all fence users to write for their catalogue, which fully describes their line and manner of doing business.

"Let me see," began the visitor who was returning to the little town after an absence of ten years, "you used to have four sons. How did they turn out?"

"Wa-all, neighbor," drawled the old man, removing his pipe, some of them turned out a little unsartin. Bill, he got to stealin' chickens, so they rode him out of town on a rail."

"And Sam?"
"Sam? Oh, he stole a cow and they gave him five years."

"Well, what became of Jim?"
"Stole a hoss an' they strung him up in that thar apple tree."

"Too bad! But there was one more —Pete. What became of Pete, who used to be so cunning when he traded marbles?"

"Oh, Pete did well. Got in politics an' stole a legislature an' now he's livin' on his income."

Elizabeth City, N. C., Aug. Elizabeth City, N. C., Aug. 22, 1905

You can enter my name as a lifetime subscriber to your vaunted paper. I cannot afford to do without the Southern Planter.

W. W. MORRISSETTE.

Jamesstown, Va., Aug. 31, 1905.

I cannot afford to miss a single copy of the Southern Planter.

C. F. AYERS.

Don't Cheat

your face with bad soap.
Enjoy the comfort and luxury and safety of

WILLIAMS' SHAVING SOAP

Sold everywhere. Free trial sample for 2-cent stamp. Write for "The Shavers Guide" how to Dress Correctly."

The J. B. Williams Co Glastonbury, Conn.

Agricultural Lime

50 Cts. Per Bag.

Canada Hard-Wood Ashes

\$1.50 Per Bag.

SPECIAL PRICES FOR QUANTITIES.

T. C. ANDREWS & CO.,
NORFOLK, - - VIRGINIA.

Chemical Analyses

of MINERALS, FEEDING MATERIALS, WATER and other products made at reasonable rates. Correspondence solicited. J. B. WEEMS, Ph. D., Crewe, Va., Expert in Agricultural and Industrial Chemistry.

A Rare Bargain.

If you are thinking of buying a SHREDDER and are looking for a bargain, Write L. B. GILLILAND, JR., Clarksville, Va.

"Feeds and Feeding"

Prof. Henry's Great Book for Farmers and Stockmen.

Delivered anywhere for - - \$2.00
With the SOUTHERN PLANTER, 2.25

WANTED!

ALL KINDS OF
LIVE WILD BIRDS AND ANIMALS
Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

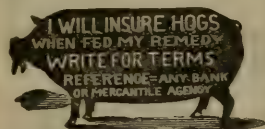
DR. CECIL FRENCH,
718 Twelfth St. N. W., Washington, D. C.

writing THE SOUTHERN PLANTER in mention.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

THE HOG IS THE Farmers Gold Mine.

Save them by feeding
Dr. Jos. Haa's Hog Remedy
NEARLY 30 YEARS SUCCESS.
Cash for Hogs that die.



It will Prevent and Arrest Disease, Stop Cough, Expel Worms, Increase Flesh, Hasten Maturity, and Pay for itself Many Times Over in Feed saved.

PRICES: 25-lb can, \$12.50; half can, (12 1/2 lbs.) \$6.50; prepaid packages, \$2.50, \$1.25 and 50 cents each. None genuine without my signature on packages or can label.

FREE TRIAL FOR 30 DAYS.

Any reader of this paper who will remit direct to me for a can or half-can of my Remedy at below prices, and will give same a fair trial for 30 days, may have his money refunded if at the end of that time he is not satisfied that his hogs have benefited, that the Remedy will do all that is claimed for it and that it is the best hog remedy he has ever used.

HOG BOOK FREE.

Latest revised edition, "Hogology," my book about hogs, will be sent FREE if you mention the Southern Planter when asking for it. Many new and important subjects have been added and every phase of swine raising, from start to finish, is covered in a thorough and practical manner.

JOS. HAAS, V. S., Indianapolis, Ind.

POULTRY FOOD

is one of our specialties. We have just gotten in a fresh Clean Stock of MEAT MEAL, BONE MEAL, BLOOD MEAL, ALFALFA MEAL, CRACKED CORN, etc., etc. In order to get eggs through the Winter months, you must feed for them. Send for our complete price list of poultry foods that will make hens lay 304 eggs. DIGGS & BEADLES, Seed Merchants, Richmond, Va.

WANTED:

Responsible parties to quote us 100 barrels Prime RED BLISS SEED POTATOES for shipment last of December.

J. L. COKER & CO., Hartsville, S. C.

TIDEWATER NOTES.

Editor Southern Planter:
"The melancholy days have come—the saddest of the year."

Sweet potatoes are all dug and stored for higher prices. The prevailing price when digging and marketing the crop from the field is 75 cents to \$1 per bbl, for the potatoes without the barrel. If the barrel is included and the potatoes are packed for shipment North, the price is a little better for such.

But the larger half of the great crop is "pitted" as it is termed. The potatoes are put in piles or heaps, sometimes in long piles or ricks, on high dry land, so that no moisture gets to the base of the pile. Then pine straw—pine tags—from the young and thrifty second growth pine forests is used to cover the potatoes with a thin covering is increased, to guard against frosts of this season, and after the potatoes have thoroughly dried out, and gone through a sort of curing process, a light covering of dry earth is thrown over the pile, and later on this covering is increased, to guard against the harder freezes of later winter.

A barrel or box or temporary cover of some kind is placed over the top of the pit, like a chimney in order to give the potatoes a chance to breathe, so to speak, or to ventilate the pile. If the potatoes are fully matured, and are handled with care, so as not to bruise them, they will generally keep in good shape, and like some old people we have known, get sweeter and sweeter with age.

The sweet potato crop is an important feature here in Eastern Virginia, reaching as it does, beyond the half million barrel mark annually, and making a cheap and sustaining article of diet, and a very palatable article of food for the masses of the laboring poor, as well as for the rich.

The second crop of "Irish Potatoes" has also been dug, as the vines have been generally cut with the frost. The larger potatoes of the crop are used to eat, and the smaller ones are stored in pits or in buildings, where the frost will not reach them, to be used for seed next February when the early potato crop is planted.

There is considerable difference of opinion as to the relative merits of such home grown seed, compared with the seed from Maine or any of the far Northern points. Some prefer the home grown seed, some the Northern seed. If the home grown seed were used entirely it would keep at least \$40,000 dollars at home for that one item alone.

Tomatoes have about all vanished from the market. Many tomatoes growers for the local markets have a way of caring for the last of the crop so as to have a few tomatoes to sell away along in November after the frost has killed the tender vine, as the tomato vine yields to a very light frost.

STOCK OWNERS USE



Foutz's

HORSE AND CATTLE

Powder

The oldest, best known, most reliable, and extensively used of all Condition Powders. It cures Chronic Cough, Heaves, Influenza, Diarrhea, Hide Bound, Indigestion, Constipation, and all Stomach Troubles. Restores lost appetite, and increases the assimilation. It assists in fattening and increases the quantity of milk and cream. Guaranteed to give satisfaction. Sold by Druggists, General Merchandise, and Feed Dealers, or sent charges prepaid at the following rate:

Package 25c; 5 Packages, \$1.00;
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BEWARE OF IMITATIONS and remember that each package of the genuine is covered with a pink wrapper. Send for descriptive literature.

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DARLING'S High Quality Guaranteed Foods.

The following in 100 lb. bags are for sale at prices as follows:

Laying Food \$2.00, Scratching Food \$2.30,
Forcing Food \$2.00, Chick Feed \$2.50,
Mica Crystal Grit 50c, Oyster Shells 50c.

Big Poultry Money

In feeding a Darling's Best Mica Grit and Best Scratching Food, you will find a saving of 10% in feed bills. This is because of the high quality of our food, and the fact that it is so easily digested. We have a large stock of all our products on hand and will ship to you on order.

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SPECIAL.

All who desire to keep consumption from their homes, children or friends, or have care of those already afflicted, should write for free directions to the

**Virginia Sanatorium for
Consumptives,**
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A benevolent institution for care of the poor consumptive and for the protection of the community.

All are invited to membership.



Kill your ducks—

don't cripple them. Shoot **U. M. C.** duck shells—no others almost as good. Arrows or Nitro Clubs loaded with any smokeless powder are hard hitters.

U. M. C. cartridges are guaranteed, also standard arms when U. M. C. cartridges are used as specified on labels.

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Agency: 313 Broadway, New York



The first remedy to cure Lump Jaw was

Fleming's Lump Jaw Cure

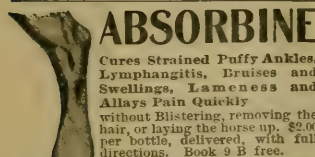
and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in

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Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.

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280 Union Stock Yards, Chicago, Ill.



ABSORBINE

Cures Strained Puffy Ankles, Lymphangitis, Bruises and Swellings, Lameness and Allays Pain Quickly without blistering, removing the hair, or laying the horse up. \$2.00 per bottle, delivered, with full directions. Book \$3 free.

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W. F. YOUNG, P. D. F.

109 Monmouth St., Springfield, Mass.

STAR PEA HULLER,

Wonder of the Age

Hull and clean Cow Peas and Beans of different varieties.

Write us for prices.

STAR PEA MACHINE CO. Chattanooga, Tenn

The entire face of the trucking belt is well set with thousands of patches of living green-kale, spinach, and lettuce crops. The early crops named, cover the ground entirely with a beautiful carpet of green and will so remain until shipped to Northern markets between now and the 15th of January, at which date the frost cuts back the tender crops for a few weeks and shipments are delayed; but the green stream will run quite steadily northward until said date (January 15th) and steady stream of greenbacks will come back to pay for the vegetable greens. Our people are continually "swapping" their vegetable "greens" for Uncle Sam's "Greens."

The reader will notice that we spell Uncle Sam's Greens with a capital "G" because such "Greens" are capital things to have on hand or in pocket or bank. One of the principle and most desirable and attractive features of this section is that our people, who are so disposed, are selling something at all seasons of the year, and a steady stream of "Greens" is going North and coming South all the year.

The fall shipments of kale, spinach and lettuce have been going on for the past two or more weeks, in a limited way; but as soon as the northern winter asserts itself positively, the demand there increases rapidly for our green crops, prices stiffen and shipments increase.

The immense cabbage crop is to be transplanted from the plant beds, where the plants are thickly grown by the million, into the open air during this month and next.

In fact the work is quite active in the trucking belt until middle of January, when, for a period of say 30 days, the truckers are not so busy, being handicapped a little by our short winter, which may be said to be limited to a 30-day period from January 15th to February 16th.

The fall weather has been very fine indeed. It has been a little more dry than usual, and warm, sunny and pleasant. To-day (November 14th) is the first gloomy day of the season. The wind is from the northeast, and sounds like the fall of the year. The leaves on the hard wood trees and shrubs have turned sere and brown or yellow, which brings out the living beautiful green of the evergreen trees and shrubs to perfection. As fully half our trees and shrubs are evergreens, winter does not transform our section very much.

Our farmers and truckers are ready for the short, mild winter, but most of the corn is still unshucked in the fields, on account largely of shortage of labor; but it will be gathered later on and cribbed, and does not injure standing in the fields until the new year.

A. JEFFERS.

Norfolk, Va.

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeney, Capped Hook, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Cures, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

NO MORE BLIND HORSES.

For Specific Ophthalmia. Moon Blindness and other sore eyes, Barry Co., Iowa City, Ia., have a sure cure.

A\$20 Watch for \$5.45



These figures tell exactly what we are doing—selling a \$20.00 watch for \$5.45. We don't claim that this is a 40 on watch or a \$20.00 watch, but it is a \$20.00 watch. A leading watch man factors, being half crossed, for really cut, constantly sold us broken watches—watches actually sold at retail at \$20.00. There is no word said that we will lease them to dealers for \$12.00 or \$15.00, but this we did have a great amount of labor, time and expense. In the end our profit would be little more than the selling the watch direct to the consumer at \$5.45. The Elvinton Watch, which was sold for \$5.45 is an fine, 21 jeweled, only 14 and perfectly adjustable movement. It has specially selected jewels, disk hand, patent regulator, enameled dial, jeweled compensation balance, double hunting case, genuine gold-plate and hands—only engraved. Each watch is the weekly tested, tested and recoiled, before leaving the factory and both the case and movement are guaranteed for 25 years.

Put up this advertisement and mail it tons to-day with your name, postoffice address and nearest express office. Tell us whether you want to buy, or get a watch and we will send the watch by express collection. If it satisfies you, after a careful examination, pay the express agent \$5.45 and express charges and the watch is yours, but if it doesn't please you return it to us at our expense.

A 25-Year Guarantee will be placed in the front case of the watch we send you and to the first 100,000 customers we will send a beautiful gold-plated watch chain, free. We refer to the First National Bank of Chicago, Capital \$1,000,000.

NATIONAL CONSOLIDATED WATCH CO.

Dept. 255, CHICAGO

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Our Northern Grown Seeds

MAKE SOUTHERN CROWERS RICH

You are growing potatoes and other truck for the Northern market.

You are not in business "for your health" alone—you want wealth, too—at least a fair return for your land and labor.

Are you making the mistake of growing from your own seed year after year? That, then, is one reason why your crops are small. You have your land—or perhaps you try some expensive new fertilizer, when perhaps your seed is only *See Seed*, grown in a different climate and soil.

Have you tried our *Northern Grown Seed*? If not, that is likely the trouble.

But you say, why should Northern grown seed be better?

Well, for several reasons. First, it is more vigorous. The sprout in the air, or something else, seems to give Northern grown seeds more vitality. In other words, they sprout quicker, and a quick start is worth many dollars to the man who is growing for the Northern market.

Then the short Northern season makes crops from all Northern grown seed mature a great deal earlier; another short cut to greater profits from your acreage and your time.

Now, instead of grumbling about the "good luck" of others or blaming your land as "run out," try our Northern Grown Seed. We make a specialty of growing for Southern trade. Let us help you to a new start.

POTATOES—We have all the old time tried favorites, but our new *Extra Early Potosky* is a wonder.

The *Early Potosky* grows close in the hill, easy to dig, yield is large tubers big, small ones seldom found. Is white as milk, eyes small. Cooks dry, with delicious flavor.

Send 26c, stamps or coin, and receive one large seed potato worth dollars to anyone, and our complete catalogue of *Northern Grown Seeds*, all big producers.

We send catalogue alone free. Write today.

Dating & Seaborn, 201 Michigan St., Detroit, Mich.

We are GROWERS, sell you direct and save you money.



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Tobacco = Seed

Farm in the World.

Headquarters for Tobacco
Seed of Every Variety.

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SLATE SEED COMPANY,
Hycos, Halifax Co., Va.

TREE PROTECTORS.

75c per 100. \$5 per 1,000.
As valuable in summer against sun-scall, hot winds, etc., as they are in winter against cold winds and rabbits. Recommended by all leading Orchardists and Horticultural Societies. Send for samples and testimonials. Do not wait until Rabbits and Mice ruin your trees.

WRITE US TODAY.
Wholesale Nursery Catalogue now ready.
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Agents Wanted everywhere.
HART PIONEER NURSERY
Series

Fort Scott, Kans., Box 91.

Always mention the Southern Planter when writing advertisers.

AN AXE THAT WON'T FLY OFF.

A Simple Invention that Locks the Ax Head to the Handle and Prevents Accidents.

An ordinary axe has a marked tendency to "fly off the handle." Sometimes the wood shrinks because the weather is dry, the wedge works loose and off comes the axe. Then, again, just plain, ordinary hard work often causes the head to fly off. Whatever the cause, it always means loss of time, serious inconvenience and often a dangerous accident.

A wedge that positively and absolutely prevents the head of an axe, hatchet or hammer from flying off has been invented, and is known as the Grellner Patent Everlasting Wedge. It is a simple device, and, like many other important inventions, one looking at it is led to exclaim: "Why didn't I think of it!"

This wonderful wedge only comes with the Keen Kutter brand of handled axes and hatchets. When you consider this great advantage, together with the fact that the most perfectly tempered steel only is used in Keen Kutter tools, you will see how superior this brand is to other makes.

The Keen Kutter name covers a complete line of tools, so that it is possible to have the protection and guarantee this famous brand affords, no matter what tool you want.

For thirty-six years Keen Kutter tools have been made with the thought always in mind that "The recollection of quality remains long after the price is forgotten." No wonder they were awarded the Grand Prize at the St. Louis Exposition, the only grand prize ever awarded a complete line of tools.

Some of the kinds of Keen Kutter tools are: Axes, Adzes, Hammers, Hatchets, Chisels, Screw Drivers, Auger Bits, Files, Planes, Draw Knives, Saws, Tool Cabinets, Scythes, Hay Knives, Grass Hooks, Brush Hooks, Corn Knives, Eye Hoes, Trowels, Pruning Shears, Tinners' Snips, Scissors, Shears, Hair Clippers, Horse Shears, Razors, etc., and Knives of all kinds.

If your dealer does not keep Keen Kutter tools, write to the Simmons Hardware Company, St. Louis, or 298 Broadway, New York, and they will see that you are supplied.

Edenton, N. C., Oct. 11, 1905.

I want the Southern Planter as long as my eye sight will permit me to read, as I consider it a valuable journal, that every farmer could not get along without.

D. G. BOND.

Jackson, Tenn., Oct. 18, 1905.

We all think the Southern Planter the best agricultural paper published. I have been patronizing from eight to ten agricultural papers for years but think the Southern Planter the paper for all Southern Farmers.

S. S. BOND.

Ferry's Seeds are best because in successful years have been spent in their development—half a century of expert care in making them superior to all others.

We are specialists in growing sweet and pea-seed and seed—1906 Seed Annual free.

D. M. FERRY & CO.,
Detroit,
Mich.

FERRY'S SEEDS

Cow Peas.

We offer for prompt shipment, 7,000 bushels of cow peas, free from weevil; 1905 crop:

Clays and mixed.....	\$1.00 per bushel.
Blacks, Whips, and Red rippers.....	1.15 "
New Eras.....	1.35 "
Whites.....	1.65 "
Soja beans.....	1.15 "
Amber Cane seed.....	1.30 "

We also offer several thousand bushels of choice SEED SWEET POTATOES, for spring delivery of the following varieties: White Yam, Queen, Vineless, Early Red Skin, Pumpkin Yam, Norton Yam and Hayti.

Write for prices.
HICKORY MILLING CO.,
Hickory, N. C.

TREES.

I offer a fine lot of whole root trees.

APPLES, PEARS, PEACHES,
CHERRIES, PLUMS, GRAPE VINES,
RASPBERRIES, ETC.

Save agent's commission by sending your orders to the nursery.

CATALOGUE FREE.
All Stock Inspected and Fumigated.
WERTZ'S NURSERY, SALEM VA.

Strawberry Plants.

New Home, Cardinal, Clamworth, Oaks Early, Champion, Glen Mary, Wm. Bell and 91 others. Loretta and Fremont-Berry. Seeds: Livingston's Globe and Allen's Best Tomato, Allen's First Choice and Rocky Ford Cantaloupe, Victor, Honey Maker, Early Fortune and Perfection. Price per dozen. Various tested seedlings and a full-line standard garden, field and flower seeds, bulbs, etc. Write for catalogue free.

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THE NUT NURSERY COMPANY, MONTICELLO, FLA.

Growers of choice varieties (by budding and grafting) in the more important species of Nut bearing trees, which are of value to planters in this country. Extensive propagators of the improved Large, Paper and Soft Shell varieties of Pecans. Paper for catalogue.

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Apples, Pears, Peaches, Plums, Cherries, Blackberries, Raspberries, Currants, Asparagus Roots and Rhubarb, Grapes in assortment; American GINSENG SEED and Roots. Full line of Ornamental Trees, Shrubs, Hedge Plants and Roses. Peach trees grown under contract. Write for prices.

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TREES, PLANTS, ETC.

One Year Old and June Bud Peach Trees, One and Two Year Old Apple, Pear, Cherry and Plum Trees, Grape Vine, Shrubbery, Roses, etc. Also all kinds of Small Fruit Plants, Strawberry Plants by the million. Write for Catalogue.

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An Incubator

get our free catalogue. It will give you some money-saving points even if you do not buy of us. COLUMBIA INCUBATOR CO., Box 11, Delaware City, Del.

NO GUESS WORK

With the "MANDY LEE" heat, moisture, ventilation—three essentials to successful flocks—are under absolute and independent control of operator all the time. Catalogue tells how. Write today. GEO. H. LEE CO., 5154 Harney St., OMAHA, NEB.

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is FREE for the asking. Drop us a postal today and learn the difference between the Ertel machine and the cheap kind. The Book tells facts you ought to know if you are thinking of an incubator investment. There's money in chicken raising—big profits in ducks—large returns on incubator hatched turkeys. Let us start you right. Don't waste eggs, oil, and time on a poor machine. Get the benefit of our years experience. Profit by the successful methods of others as described in our book. Write for it all. Geo. Ertel Co., Quincy, Ill.

You can't tell a good incubator or a good brooder by looking at them. The only true test is in the Hatching and Raising of Chicks. The machines that Prove Best by that test are the

IDEAL

Incubators and Brooders.

Made by the man who knows and backed by the J. W. Miller Co., guarantee to give you satisfactory results or your money back after 30, 60 or 90 days Free Trial. If you are discouraged try the Ideal—if you don't want to be discouraged try the Ideal, send for the book "Poultry for Profit"—Free. 128 pages, illustrates and describes everything needed to raise poultry.

Address J. W. MILLER CO., Box 312, Freeport, Illinois.

Mention The Southern Planter when writing advertisers.

READ THIS.

All swine-raisers can have good success with their hogs and be protected from a possible loss from disease and unthriftiness if they will feed Dr. Jos. Haas' Hog Remedy, the well-known preparation that has been manufactured and sold for almost thirty years, with a reputation second to none, and which has stood all manners of tests during that period and to-day stands without a peer.

Note his ad. in this issue, and also his offer to send to each and every swine-raiser a copy of his valuable book "Hogology" upon the asking for it.

The following letter was recently received by Dr. Jos. Haas, which is convincing in itself:

Dr. Jos. Haas, Indianapolis, Ind.

Dear Sir.—We wish to thank you for the prompt shipment of our recent order for Hog Remedy and state that we have been feeding this Hog Remedy to our hogs for some time with very satisfactory results and it appears from the results obtained that your Remedy is an excellent preparation, and we can highly recommend it and can also state that we will always keep it on hand to feed regularly to our hogs.

Yours very truly,

PINEHURST GENERAL OFFICE, Leonard Tufts, Owner. Pinehurst, Moore Co., N. C.

Mr. W. F. Young, Springfield, Mass.

Dear Sir.—The Absorbine ordered from you gave perfect satisfaction. You will find enclosed money order for \$4.00 for two bottles. Send by express at once, etc.

Yours truly, J. F. KELLY, M. D., Physician and Surgeon.

Absorbine \$2.00 per bottle at your dealers or sent express prepaid upon receipt of price. W. F. Young, P. D. F., 109 Monmouth St., Springfield, Mass.

A city boarder who spent a few weeks on a New England farm early in the summer says that he one day rode down to the village with his landlord, who, he had already discovered, had the New England instinct of thrift to an almost alarming degree. While they were in the village "general store" together, the boarder noticed a soda-fountain at one end of the store, and pointing to it said to his host: "Supposing we try a glass of that drink?"

"You goin' to pay for it?" asked the wary farmer.

"Certainly I am."

"How much will it be?"

"Five cents, I suppose."

"Wa-al, say, if it's all the same to you I'll take five cents' worth o'ten-penny nails. I'm needin' some the worst way."



To quickly introduce the Celebrated Electric Balm Toilet, Bath and Compressor Soap we offer these rare and extensive Calendar Watches ABSOLUTELY FREE to every one answering this advertisement. We also send package of Soap. Enclose Stamp for postage. Address: Standard Soap Works, New York City, P.O. Box 105 Dept. 13.

LOOK!

Reminiscences of a Virginian 86 years old. 53 years an affiliated Mason.

Interesting sketches of American Statesmen including anecdotes and historic events dating from Nov. 1833, to the present time.

Copy mailed on receipt of 25 cts. by address the author.

A. P. ROUTT, 18 Iowa Circle, Washington, D. C.

Jacks, Jennets and Mules.

A fine lot of Kentucky bred and big black Spanish jacks and jennets. Also mules. Match teams, one to six years old. Write or see me before you buy. Come to Kentucky if you want a good jack. KENTUCKY JACK FARM, JOE E. WRIGHT, Junction City Ky.



JACKS, JENNETS and STALLIONS.

Fine JACKS a Specialty. 3 to 5 years old past; write for what you want. Send 2c stamp for Catalogue.

W. E. KNIGHT & CO., Nashville Tenn., R. F. D. 5



KENTUCKY JACKS and STALLIONS.

100 head Jacks, Jennets, Saddle and Trotting stallions for sale. Prices reasonable. Farm 4 miles from city, on the Inter-Urban line.

J. F. COOK & CO., Lexington, Ky. Branch Barn, Marion, Kansas.

2 Setter Dogs,

1 yr. old, Price \$15 each; 1 Pair Young Fox HOUNDS, 1 Pair BEAGLE HOUNDS, \$10 per pair; MAM, BRONZE TURKEYS, "Gumbos," hens \$3, Toms, \$5; Plymouth Rocks, Thompson-Hawkins Strain, \$1 each. ROBT. B. TAYLOR, Cedon, Va.

PURE BRED

IRISH SETTER

(female) from Imported Stock, for sale; Price, \$25. P. C. C., in care of Southern Planter.

WHITE Plymouth Rocks Wyandottes S. C. Buff Leghorns AND Pekin Ducks.

If you want quality, give me your orders for Eggs for hatching, and I will guarantee satisfaction. My stock is second to none and bred for UTILITY as well as for SHOW. EGGS: \$1.50 for 15; \$2.50 for 30; Pekin Duck Eggs, \$1 for 9.
SOME CHOICE COCKERELS FOR SALE AT BARGAIN PRICES. W. O. RONDA-BUSH, Uno, Va.

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We offer the finest lot of S. C. B. Leghorn Cockerels we have ever seen at \$1 up. Also a few Barred P. Rock Cockerels at bargain prices. All line bred from first prize winners at leading shows.

Strawberry Hill Poultry Yards,
Box 287, RICHMOND, VA.

White Wyandottes

exclusively. For the next 30 days, I will offer some extra good values in WHITE WYANDOTTE COCKERELS. G. F. POIN-DEXTER, Greenlee, Rockbridge Co., Va.

B. PLYMOUTH ROCKS

exclusively Bradley Bros.—Hawkins strain. 100 beautiful pullets and young hens for sale, 75 cts. each during December.

CHOICE BERSHIRE pigs, cheap to quick buyers. DALKEITH STOCK FARM, E. W. ARMISTEAD, Prop. South Boston, Halifax Co., Va.

PIEDMONT HEIGHTS FARM, YANCEY MILLS, VA.

Has for sale this month a number of males and females of

White Wyandottes,
Barred Plymouth Rocks,
S. C. W. and Brown Leghorns.



Valley Farm BARRED ROCKS S. C. B. LEGHORNS (Forsyth Strain).

Stock for sale.
Prices right.
CHAS. C. WINE, Mt Sidney, Va

"Money in Poultry."

Our new 1906 book tells how to make it. Tells how to treat diseases. Food and care for poultry successfully. Illustrates and tells all about 40 varieties FAMOUS THOROUGH-BRED FOWLS, with Low price on stock and eggs. Send 6c. in stamps to JOHN E. HEATWOLE, Box L, Harrisonburg, Va.

A HOUSEHOLD NECESSITY.

The Greatest of All Kitchen Helps and Savers.

The secret of the almost endless variety of dishes which the skilled chef can produce from a few ingredients, lies in the fact that he utilizes every scrap of material. In his skillful hands, left over, and to the average cook, waste food, is transformed into the most savory dishes.

The ordinary housekeeper lacks the experience of these past masters of the culinary art, but more modern ingenuity has made the same results possible in every home.

The Enterprise Food Chopper minces fish, meat, fruit, or vegetables to any degree of fineness and will make nut butter. The Enterprise Manufacturing Company, of Pa., are the makers of these machines, but they are sold by all hardware and general stores everywhere.

By their use all waste in the kitchen is stopped and scores of delicious dishes and delicate desserts are easily made. They are great labor savers besides, and never a day passes when the Enterprise cannot be used to great advantage.

The Enterprise Housekeeper, a famous book of tested economical recipes and illustrated kitchen helps, published to sell at 25 c., will be sent free if you send your name and address to The Enterprise Manufacturing Co. of Pa., 333 Dauphin street, Philadelphia.

The late Captain Joe Nicholson, to memory dear in Detroit, used to tell of a long-time prisoner, who had been in the house of correction while the captain ran that institution.

Just before his term expired the convict called the captain and told him that justice was now done and that an honest man would start fresh in the world.

"But you have told me several times that you were innocent of the charge on which you were sent here."

"So I was, Captain 'Joe,' and I can prove it. Here are the names of several men and their addresses. Get their statements and see whether I'm lying."

Just as a matter of curiosity the captain complied, and found convincing evidence of the man's innocence.

The convict was called in and indignantly asked why he had not used his evidence in getting a new trial.

"I'll tell you, captain. In my time I was acquitted three or four times when I was guilty, so when I was convicted of something I never did I just thought I'd even things up by taking my medicine without kicking. Besides that, it sort of tickled me to find that justice had missed me at every shot."

Georgiana, Ala., Oct. 21, 1905.

I am a subscriber to the Southern Planter and expect to be as long as I live.

L. T. AYERS.

SPECIAL BARGAINS IN

Cockerels

of the following Breeds:

**Single and Rose Comb
Buff Orpingtons, and
Barred Plymouth Rocks:**

Also some extra fine M. B. Turkeys. Our young toms will weigh 12 pounds and better, and are only 5 1-2 months old. We want room and will price to make it. Write QUEENSLAND FARM, R. D. No. 2, Hagan, Va., T. M. KING, Mgr.

Rhode Island Reds.

As good layers as Leghorns, as large and well shaped as Plymouth Rocks, and of beautiful markings. The newest and most desirable fowl now offered.

15 young cockerels at from \$1.00 to \$2.00 each, according to markings. 20 Pullets at \$1.50 each. Eggs for hatching \$1.50 per 13.

BRONZE TURKEYS, not extra large but beautifully marked, extra prolific layers, \$7.50 a trio.

Young Toms \$3.00 each. Ready for shipment in January.—A. R. VENABLE, JR., Box 147, Farmville, Va.



Poodot Hill Poultry Farm

Dr. H. H. LEE, Prop.,
BREEDER OF
SILVER LACED
WYANDOTTES.
R. F. D. 4 LEXINGTON, VA

Special prices made now to reduce stock before winter.

Write for prices for what is wanted.

ORPINGTON PLACE.

formerly "Oconeechee"

Single Comb Buff Orpington Chickens and Eggs. Cockerels \$2.00.

Pedigreed POLAND CHINA Pigs \$5 each. Older animals at proportionately low prices.

J. F. CRUDUP, MGR., Jeffress, Mecklenburg Co., Va

Glenview Orpingtons.

Single Comb Buffs Exclusively.

My cockerels will improve the quality of your flock—Wm. Cook & Sons, strain—Prices \$2 each and up. No culls for sale.

B. S. HORNE, Keswick, Va.

S. C. B. LEGHORN

Fowls and B. P. ROCK hens; Eggs in season; inducements to quick buyers.

MRS. A. W. DAVIS, Blanton, Va.

15 RHODE ISLAND RED

Cockerels for sale; only breed on the farm. Guaranteed pure. Address MRS. JOS. M. HURT, Blackstone, Va.

Always mention the Southern Planter when writing advertisers.

ROSE and S. C. RHODE ISLAND REDS.

S. C. Brown and White Leghorns, White Wyandottes, B. B. Red Game and Barred Plymouth Rocks. Choice stock for sale. Eggs in season. Write for prices. RIVERSIDE POULTRY FARM, J. B. COFFMAN & SONS, Prop'rs., R. F. D., DAYTON, VA.



FINE FOWLS.

BARRED, BUFF and WHITE PLYMOUTH ROCKS; SILVER, WHITE, BUFF and PARTRIDGE WYANDOTTES; BLACK MINORCAS; BLACK LANGSHANS; LIGHT BRAHMAS; PARTRIDGE COCHINS; WHITE and BROWN LEGHORNS.

We are headquarters for stock and eggs of the above breeds, and will give satisfaction every time. OAKLAND POULTRY FARM, C. J. WARINER, Manager, Ruffin, N. C.

S. C. Brown Leghorn

Eggs, 75 cents for 15. Book your orders now for Spring Delivery. Special care given to each order. Satisfaction guaranteed. MEHERRIN POULTRY FARM, Branchville, VA.

The manager of the above farm is well-known to me and is thoroughly reliable. S. B. COGGIN, Agt., Southern Express Co.



20
White Wyandotte
COCKERELS for Sale.
Beauty, Size and Eggs
is what I breed for
Fall Creek Poultry Farm
A. L. PARKER, Ashland, Va.

PIT GAMES.

Black Devils and Red Cubans.

Where they won, Sharon, N. Y., 4 out of 5. Blue Rock, Pa., 2 out of 3. Clarion, Pa., 5 straight. Roanoke, Va., 8 out of 9. Akron, Ia., 2 straight. Eggs, \$2 per setting.

THOS. W. JARMAN, Yancey Mills, Va.

N. B. TURKEYS,

EMBED GEESSE,

PEKIN DUCKS,

B. P. R. CHICKENS.

I have been in business for 18 years. My birds are high bred and give satisfaction which I guarantee. Route 1, CHARLIE BROWN, Cartersville, Va.

OVERSTOCKED.

ANCONAS, the best winter layers. Trio.

\$2.50, pen of 5, \$4.50 f. o. b., S. C. B. OR-

PINGTON cockerels. W. WYANDOTTES.

HUGENOT POULTRY YARDS, Route No.

2, Dublin, Va

W. Plymouth Rocks

LARGE and PURE WHITE.

BEST LAYING STRAINS.

Cockerels and Pullets or sale

Good B. LEGHORN Cockerels at 75c. and \$1.00

R. W. HAW, Centralia, Va.

OF VALUE TO HORSEMEN.

Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness, or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

THE COMPANION AS A CHRISTMAS GIFT.

Can you think of anything more certain to be acceptable than a year's subscription to The Youth's Companion? Is there any one, young or old, who, having once had the paper in his hands and looked through it, did not wish to possess it for his very own? It is a gift which, far from losing its freshness as Christmas recedes into the past, grows more delightful, more necessary to one's enjoyment week by week.

On receipt of \$1.75, the yearly subscription price, the publishers send to the new subscriber all the remaining issues of The Companion for 1905 and the 'Minutemen Calendar for 1906, lithographed in twelve colors and gold.

Full illustrated Announcement of the new volume for 1906 will be sent with sample copies of the paper to any address free.

THE YOUTH'S COMPANION,
144 Berkeley Street, Boston, Mass.

"Tony," said a moody British officer to his soldier servant, "something tells me that I shall never come back from this war alive. I seem to have a sort of presentiment that way."

"Then tak' no heed of it, sir," responded the servant. "Them their presentiments is frauds. A cousin o' mine had one once, and it treated him real shabby. It was just like the one that's a-troublin' you now, sir. He felt sure that he'd be kilt out in Egypt, so he divided his savings between his sweetheart and his bosom chum, and went out to be shot. But never a scratch did he get all the time, though he tried his level best to manage it."

"And what happened when he at length returned, Tony? Did those two give him back the money?"

"Not a farden, sir. They'd been and got spliced while he was away, and they'd set up housekeepin' on it!"

EDGE HILL FARM POULTRY. BROWN LEGHORNS EXCLUSIVELY.

Eggs for hatching from new matings. Best laying strain \$1.00 for 15, \$6.00 per 100. No stock for sale.

CAL HUSSELMAN, Roxbury, Va., R. F. D. 1.

White Wyandottes.

Extra fine lot of 6 months old White Wyandotte cockerels, \$1.00 each. Eggs in season.—MRS FENTON NOLAND, Hewletts, Hanover Co., Va.

Barred Plymouth Rock

Cockerels for Sale; the Kind to put at head of your yards.

I. TABB JANNEY, Van Clevesville, W. Va.

LOOK HERE QUICK.

Going now. Large, handsome MAMMOTH BRONZE TURKEYS, 80 strong. Headed by a 45 lb. Tom, WHITE WYANDOTTE and BARRED PLYMOUTH ROCK cockerels, S. C. B. LEGHORN hens.

Send in your orders for the beauties to LANDOR POULTRY YARDS, Miss C. L. Smith, Prop., Croxton, Va.

"BRIGHT'S" BARRED ROCKS are unequalled for quality. My birds are noted for good combs, good shape, good bright bay eyes, rich yellow legs, large size clear distinct barring. They never fail to give satisfaction. They have the breeding back of them and will produce themselves.

We will sell a few good pullets at \$1 and \$2 each. Cockerels, \$1.50 to \$5.00. S. C. Brown and White Leghorn cockerels, \$7.50 to \$15.00.

M. B. Turkeys, \$2.50 to \$5.00. Pure bred Berkshire, 4 mos. old, \$5.00.

Order early and get the cream. Satisfaction guaranteed.—PINE HILL POULTRY YARDS, P. B. Watson, Jr., Chatham, Va.

SINGLE COMB

Brown Leghorn

pullets, Biltmore Stock, 7 mos. old, \$1 each; \$5 for six; \$9 for twelve; Also, a FEW FINE COCKERELS, same breeding, at \$1 each to close them out; all pure bred; prompt attention.—GITCHELL BROS., R. F. D. 2, Charlottesville, Va.

ROSE AND SINGLE COMB

WHITE WYANDOTTE

Cocker, 6 mos. old, weight 7lbs, 75c. each. MRS. HERBERT CAREY, Ivy Dep., Alb. Co., Va.

S. C. R. I. RED

Cockerels, \$1 to \$1.50; WHITE HOLLAND TOMS at reasonable prices. J. W. MORRIS, Waldrup, Va.

BLACK MINORCAS.

I have a few more nice pullets and cockers, Mar. and April hatching for sale.—A. C. THROCKMORTON, Rapidan, Va., R. F. D. No. 1.

W. P. R. FOWLS.

800 Egg Incubator, cheap.

Jersey Bull Calf, \$10.

Poland China Pigs, \$2.50.

Berkshire Sow \$12.

B. F. AVERILL, Howardsville, Va.

Mention The Southern Planter when writing advertisers.

FOR TURKEYS SALE.

The Celebrated MAMMOTH BRONZE, bred by the best Poultry Yard in the East. First orders, first choice of birds. **PIEDMONT POULTRY PLACE**, Miss., E. Calle Gile, Prop., Whittles Dep., Va.

TURKEYS.

EXHIBITION OAKSHADE M. B. TURKEYS for sale. Pure Wolf Strain. Perfect in color and size. Express prepaid.

B. ORPINGTONS and WHITE WYANDOTTES only.—HUGUENOT POULTRY YARDS, Route No. 2, Dublin, Va.

PURE-BRED

Bronze Turkeys

Mammoth in size, correct in plumage; high class fowls at farmers prices. W. G. HUNDLEY, Worlds, Va.

Dog and Chicken Fancier.

SHERWOOD CHICKENS, M. B. TURKEYS, ENGLISH SETTERS and POINTERS.

Mammoth Bronze Turkeys

—AND—

White Plymouth Rock

fowls; Eggs in season. Mrs. F. H. WILKINSON, R. F. D. 1, Alexandria, Va.

MAMMOTH

Bronze Turkeys

of the leading strains, large size, correct in plumage, toms and hens not akin. **LESLIE D. KLINE**, Vaucluse, Va.

MAMMOTH

BRONZE TURKEYS

from Hens 22 to 24 lbs. and Tom 36 lbs., for sale. Barred Plymouth Rock chickens, very fine. Large English Berkshire pigs eligible to registry.

Mrs. W. F. JACKSON, Olga, Amelia Co., Va.

White Holland Turkeys.

Trio,	\$7.00
Toms,	3.00
Hens,	2.00

WANTED: White Holland Tom 1 yr. old. E. M. HARNSBERGER, Orange, Va.

PURE-BRED

M. B. TURKEYS and

WHITE WYANDOTTE FOWLS

Dr. T. J. WOODRIDGE, Ashland, Va.

A FINE LOT

MAMMOTH BRONZE TURKEYS

for sale. First orders get best birds. Apply to R. E. CREE, Crozet, Va.

PURE-BRED

War Horse Game

fowls; males, all ages for sale. C. T. LAMB, Garland, N. C.

QUALITY

FARRED PLYMOUTH ROCKS. See my ad in October Planter, Page 788. L. W. WALSH, Drawer 248, Lynchburg, Va.

Mention the SOUTHERN PLANTER in writing.

THE SUCCESS MANURE SPREADER.

One of the first firms in the United States to make a satisfactory manure spreader was the Kemp & Burpee Mfg. Co., of Syracuse, N. Y. This concern has been advertising with us for a number of years, their "Kemp Spreader." About two years ago they added so many improvements to their machine, retaining all of the old features which have stood the test, and changed the name to "Success." This machine is entitled to rank with the very best spreaders beyond a doubt, as it has given satisfaction for so many years. We, therefore, suggest that any of our readers who want a good machine for spreading manure, lime, compost, etc., write to the above firm for a recent catalogue describing the "Success."

FIRM CHANGES HANDS.

We learn that The Truss & Cable Fence Co., of Cleveland, Ohio, has been recently purchased by Mr. Carl Horik, and that the business will be continued under the same name as heretofore. Mr. Horik advises us that with increased facilities they are now in a position to handle their still increasing business and have gotten out a handsome catalogue, which they will be pleased to mail on application.

DARLING & CO.'S CATALOGUE.

We acknowledge receipt of a very handsome catalogue of Darling & Co., manufacturers of poultry foods and supplies, Chicago, Ill., and Long Island City, N. Y. This catalogue is a beautiful specimen of the printer's art and all interested parties should send for it at once.

This firm is a new advertiser with us this season and we should like to see them encouraged in their efforts to sell first class articles at reasonable prices.

SPLENDID RESULTS.

Southern Planter Publishing Co., Richmond Va.:

Gentlemen.—The small ad. of mine in November Planter gave good results. I sold one setter dog at \$15, four beagle hounds, (rabbit dogs) at \$5 each, three turkeys for \$10, and five P. Rock fowls for \$3.75; total \$48.75, and the replies continue to come. I always get good results from the old reliable Southern Planter.

Yours for business,

ROBT. B. TAYLOR.

Chocowinity, N. C., Nov. 19, 1905.

The Southern Planter is a necessity. W. H. PATRICK.

Alaska, W. Va., Oct. 31, 1905.

I enjoy the Southern planter very much and could not afford to be without it.

J. H. SMITH.

Muscovy Ducks.

Very fine large Muscovy Ducks, \$2.50 per pair. Also a few White Plymouth Rock Cockerels choice breed. Mrs. S. Y. GILLIAM, Church Road, Va.

PURE BRED

PEKIN DUCKS

AND

W. HOLLAND TURKEYS.

F. S. KILGOUR, R. F. D. 2, Rockville, Md.

25 or 30 Pullets Wanted

Any good breed; also 3 or 4 Roosters not akin; must be healthy, good size and at farmers prices (one yr. hens will do).

THOS. SHOOSMITH, Irwin, Va.

Homer Pigeons,

Bred of choicest selected stock from Plymouth Rock Squab Co., \$1 per pair.

C. DE BRUYN KOPS, Wake, Va.

MORELAND FARM,
TAYLORSVILLE, VA.

H. G. HUNTER, Proprietor.

Thoroughbred ANGORAS. Only-bucks for sale. Correspondence solicited. Invitation invited. Satisfaction guaranteed.

FINE HORSE FOR SALE.

One extra fine bay horse, 8 years old; very stylish, active and handsome; about 16 hands high and weighs 1,000 lbs.; good saddle and choice driver; safe in all harness. The best all around horse in the country. J. F. DAVIS, Blanton, Va.

For SALE or TRADE

at the low valuation of \$300, the handsome REGISTERED PERCHERON STALLION, Dom Pedro, 15, 558. 12 years, etc., Dapple gray yrs. old, wght., 1600 lbs. in fair condition. Offered at a low price as I must sell to close partnership.

N. S. Hopkins, Gloucester, Va.

THREE

Angora Bucks

AT \$15 EACH.

Broken Ponies

for children; \$135 each.—DR. WM. C. JOHNSON, Frederick, Md.

LIVE STOCK FOR SALE.

A beautiful cream colored mare 15½ hands high, weight about 1,000 lbs. rides well, nice gentle driver, perfectly reliable in all harness. Compactly built and easy to keep. Will sell cheap.

A splendid team of 1,200 lbs., horses. Iron gray, and black; drive nicely and work well every where. Coming 7 year old. Compactly built and easy to keep.

1 extra fine black saddle horse 7 years old; very stylish and handsome; weight, about 1,200 pounds; perfectly reliable in all harness. I don't believe there is a better horse in Virginia.

A fine lot of thoroughbred O. I. C. pigs, both sexes, at reasonable prices. 7-8 and 15-16 GRADE ANGUS BULL and Heifer Cows.

BULL CALVES out of Shorthorn Cows, by Angus Bull.

Several registered Angus bull and heifer calves.

S. L. Wyandotte Eggs, \$1 for 15. W. M. WATKINS & SON Prop's, Saxe, Va.

Now is the time to build

a good Herd of

SHORTHORNS

while cattle are low.

I can furnish any one with a Young Herd good enough to show, by LORD LAVENDER and SIR JOHN BULL, the two best herd bulls, I ever owned, both are now dead, and this will be the last opportunity to get their calves.

I have a few heifers by the above named bulls that range in age, from 3 mos. to 12 mos. I will sell several cows by Lord Waldon, Gov. Tyler, and Lord of Spring Creek for a great deal less than their value. Also,

PERCHERON STALLIONS

for half of their real value; Now is the time to buy them cheap, as I am buying feed.—JOHN F. LEWIS, Lynwood Stock Farm, Lynwood, Va.



Willow Glen HERD OF Shorthorns.

SPECIAL OFFERING of 5 young cows and heifers and 2 yearling Bulls; one cow and heifer have been bred to PRINCE ALBERT and two young cows have calves at side by him. PRINCE ALBERT was 2nd prize, Junior Bull Calf at the Chicago International, 1903, and 1st in Class and Sweepstakes Bull at the Roanoke, Va., Fair, this Fall.

Will be pleased to have interested parties come and see this offering. This ad will not appear again.

Dr. D. M. KIPPS, Front Royal, Va.

The Springwood Shorthorns

offers for sale 4 HEIFER CALVES, 2 red and two roans, and 3 NICE BULL CALVES; also POLAND CHINA pigs. Pedigree furnished with all stock sold. Prices that all farmers can afford to buy to improve their stock.

Write your wants.

WM. T. THRASHER Springwood, Va.

SHORTHORNS.

From Registered Stock.

2 heifers, 5 mos. old, 1 18 mos old., 1 bull 5 mos. old, cheap if sold at once. Also some POLAND CHINA PIGS 10 weeks old. Stock all in good shape. Now is the time to get bargains.

Write or call on A. J. S. DIEHL, Port Republic, Va.

TWO PURE-BRED

Shorthorn Bulls

Calves for sale; from the Celebrated Spencer herd of pure MILKING SHORTHORNS of Spring Creek, Pa. Pedigrees furnished.

ANTRIM STOCK FARM, Warrenton, Va.

FARMER'S NATIONAL CONGRESS.

As the time for meetings of various agricultural organizations is at hand, when many of the leading farmers of the country will meet for discussion and friendly intercourse, attention is called to the Farmers' National Congress. It is the only all-round national agricultural body in the country, which meets annually to discuss broad national agricultural problems, and to pass resolutions. There is a field for such an organization, and the one above named has had a useful and successful career for 25 years. But its officers and friends desire to increase its usefulness and to have it even better attended and more representative than in the past. More than 95 per cent of its membership are actual farmers. The others are editors or proprietors of farm papers, officials of national or state departments of agriculture, and others in close touch with agriculture. There is no fund for paying expenses of delegates to the annual sessions. This includes the officers, who serve without pay. The Congress does not include in its membership the element that seeks a free junket or personal advantage. Another session will not be held until next autumn, but the present is a favorable opportunity to consider it, and bodies which meet only once a year and that in the winter, can take action, should they desire to do so, only at this season. The Congress is composed of delegates from the different states, appointed as a rule by the governors of the states, but official representatives from live agricultural bodies are always welcome, and when such representatives are duly elected by their respective organizations, governors will doubtless be very willing to appoint them as state delegates to the next Congress.

GEORGE M. WHITAKER, Secretary.
P. O. Box 1332, Boston, Mass.

The man who uses ordinary soap for shaving has his troubles and plenty of them. His razor pulls, the lather dries on his face, and when he has finished, his face smarts, and stings and itches, and looks like part of a torchlight procession. Williams' Shaving Soap avoids all this. It makes a thick, creamy lather, which softens the beard, makes it easy for the razor, and leaves the face cool, smooth and comfortable. The J. B. Williams Co., of Glastonbury, Conn., whose announcement appears in another column, will send a free trial sample of Williams' Shaving Soap if you write to them.

Baltimore, Md., Sept. 19, 1905.

The Southern Planter has been of great service to me, as my farm is in Mathews, Va., my old home, and its cultivation has been guided very much by your paper.

SHEPARD G. MILLER.

RARE BARGAIN IN HEREFORDS

IF TAKEN AT ONCE, GOOD REASONS FOR SELLING.

BELLE DONALD 47th, calved June 22, 1904; sire Beau Donald 89th, dam Belle Donald 46th.

INEZ, calved August 10, 1903; Sire Van 120268, dam Actress 7th, 111318

LADY OF INGLESIDE 161817, calved Mar.

2, 1903; sire Verne 120627, dam Gladys 97042

PRINCESS DONALD, calved Aug. 20, 1904;

sire Beau Donald 8996 dam Princess R. 10th.

IONE 186293, calved Oct. 27, 1901; sire Mar-

maduke 90038, dam Irene 90767.

AUTRESS 7TH, calved Aug. 1, 1900; sire

Actor 3d 65928, dam June 60449

PANSY 90772, calved March 20, 1899; sire

Montcalm 71407, dam Peerless 88361.

PRINCESS R. 9TH 142711, calved Jan. 2,

1902; sire Prince Rupert 79539, dam Lily

Princess 26729

PRINCESS R. 12TH 142714, calved Jan. 5,

1902; Sire Prince Rupert 79539, dam Lily P.

2d of P. 6597.

PRINCESS R. 7TH 130479, calved March 11,

1901; sire Prince Rupert 79539, dam Florence

2d 65938.

All of breeding age have been served to Rex Premier 145572, whose show record as a calf is first at Missouri State Fair, first Hamline, Minn., and first at Kansas City, Royal.

The above are all choice individuals. Every animal guaranteed. They represent the very best Hereford blood, but this will not be considered in pricing them for prompt acceptance. Address

ELKTON STOCK FARM, FOREST DEPOT, VA.

Hereford Bulls

Registered young stock for sale. HIGH GRADE HEREFORDS of both sexes; also, WANTED some high grade SOUTHDOWN EWES. WM. C. STUBBS, Valley Front Farm, Sassafras, Gloucester county, Va.

DEVON HERD. HAMPSHIREDOWN FLOCK ESTABLISHED 1894. ESTABLISHED 1890.

DEVON CATTLE

BULLS and HEIFERS,
Hampshire Down Sheep,
RAMS and EWES.

ROBT. J. FARRER, Orange, Va.

GROVE FARM

R. F. D. Cockeysville, Md.

First Prize Herd

Guernseys

at Timonium and Hagerstown, Maryland. (only place HERD Shown).

BULLS ONLY FOR SALE

OUR BEEKSHIRES.

were unbeaten at Timonium (Baltimore County), York Pa., and Hagerstown, Maryland, the only places shown in 1905. PIGS OF BOTH SEXES for sale.

C. & P. Telephone and Telegraph, 431

Lutherville, Md.

JAS. McK. MERRYMAN.

Coquette's John Bull,

H. R. No. 63980,

Dam Coquette of Glen Royal and No. 64981, sire Canada's John Bull, No. 60028.

I have used this Bull as the head of my herd and desire to change my strain. He is a pure St. Lambert. His Dam, imported, had a record of 23 bs. 8 oz., butter in 7 days. His sire Canada's John Bull's too well known for me to connect with.

This Bull is equal to any Bull in the country and can be bought at far less than his value, as animals bred in the Purple, as he is, usually sell for.—A. R. VENABLE, JR., Box 147, Farmville, Va.

Biltmore Farms,

R. F. D. No. 2.

Biltmore, North Carolina

THE HIGHEST STANDARD

—OF—

JERSEY BULLS

AND

HEIFERS.

Also the best
type of young

Berkshire Boars

AND

Sows

For sale at
all times.

Write for full particulars.

3 YOUNG BULLS

from 6 mos. to 18 mos. old, each from cows that have given over 2 lbs. of butter a day, sons of Coquette's John Bull at \$50.00 each. Their equals cannot be bought in the North for less than \$100.

Heifers and Heifer Calves for sale at reasonable prices. A young Bull, son of Coquette's John Bull, which I sold, took 2d Premium in competition with some of the finest Herds in the country at the Lynchburg Fair.—A. R. VENABLE, JR., Box 147, Farmville, Va.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS And HEIFERS.



None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls, 4 to 6 months old, \$75. Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRAWELL, Prop., Battletown, N. C.

3 REGISTERED

Red Poll Bulls

3, 7 and 6 mos old for sale.—W. G. LOVING, Supt. Oak Ridge Farm, Oak Ridge, Va.

WASHINGTON NOTES.

The American Association of Farmers' Institute Workers held their sessions at Washington this week. Farming as a science has been discussed at the daily sessions, while a suggestion was adopted to broaden the scope of the organization by the appointment of standing committee whose duty it will be to superintend the work of their sections. More money will be necessary to put this plan in operation. As the organization is an international one, it is thought Congress might refuse to grant the appropriations necessary and therefore individual States will be asked for funds.

At the session held on Friday, Assistant Secretary of Agriculture W. M. Hays, addressed the session. Among other things, Mr. Hays showed the value of the consolidation of small schools in different counties throughout the country into larger institutes where, in addition to the ordinary educational course, students would get instruction in agricultural pursuits. By this plan, it is believed, there would be a far wider knowledge of scientific agriculture among the farmers' children, so that when the younger generation grew to maturity, managing their own farms, the country would profit by their receiving sound and practical instruction at the institute. Mr. Hays also said that he was in favor of extending the present eight-year course given in most schools to ten years, the last two to consist of a high-school course.

Secretary Hays is credited with being one of the most advanced agricultural educators in the country. His plans for providing practical farming education for the farmer boys as practiced at the University of Minnesota, where he was engaged before he became Assistant Secretary of Agriculture, have created country-wide and even international interest, and his present position under the government largely widens his scope of influence in this regard.

"The trend of the times is for the country population to drift cityward," he said in a recent talk, "and it will require our combined and most intelligent efforts to prevent this movement from becoming a national calamity. Farm life and the business of farming must be made attractive to the young men of the country, not theoretically attractive, but practically so, if we are to maintain our agricultural balance."

The annual chrysanthemum show of the Department of Agriculture closed last week; the consensus of opinion of all who attended was that the experts of the Department are each year bringing the glory of this fall flower nearer and nearer to a climax of size and beauty. The flower at the show greatly admired was a magnificent bloom of yellow—a pro-

Angus Cattle.

For sale at attractive prices. A FEW NICE HEIFERS, 1 YEARLING BULL, 1 EIGHT MONTHS OLD BULL and some fine BULL CALVES, all the get of our registered Bull, MAKVEL (grandson of the great bull Gay Blackbird), and out of pure-bred cows.

Address

WILSON BROS. & CO.,
News Ferry, Va.

ABERDEEN ANGUS CATTLE

For Sale, 25 ANGUS HEIFERS, very high grade, about 97 per cent. pure. About 18 months old, and ready to be bred.

Also a pure bred ANGUS BULL, 18 months old and ready for service. He is a fine fellow. No better breeding in the South.

SUNNYSIDE FARMS, W. R. WALKER
Prop., Union, S. C.

ROSE DALE HERD....

Aberdeen Angus

Top notch young registered Bulls our specialty. A few heifers to sell with Bull no akin. We send out none but good individuals. Correspondence and inspection of herd invited. ROSE DALE STOCK FARMS Jeffersonston, Va.

MONTEBELLO HERD

Aberdeen Angus Cattle.

FOR SALE—Registered Bull Calves from 3 months old up.

L. H. GRAY, Orange, Va.

A NICE LOT

Aberdeen Angus

yearling Bulls, ½ pure, for sale; in fine order. For further information address, THE ROCKINGHAM CO., Spray, N. C.

Aberdeen Angus.

Herd Bull, TERRACE LAWN, REX 63, 846, or sale; As Extra good breeder, quiet and nice to handle, the low down, blocky kind.

J. TABB JANNEY, Van Clievesville, W. Va

3 YEAR OLD

Holstein==Friesan

Bull, ½ pure bred, for sale; a gentle, fine animal whose dam was a 5 gallon cow. R. S. HATCHER, Chester, Va.

A NEAT BINDER, holding one volume, 12 issues, can be had for 25 cents; Address our business office.

College of Agriculture

... AND ...

Experiment Station,
BLACKSBURG, VIRGINIA.

We are
taking orders
for Fall
delivery of



Berkshire Pigs

The litters this Fall are among the best we ever had and we can offer some choice pigs at very reasonable prices.

We have decided to reduce our flock of

DORSETS

and offer a few ram lambs and several ewes for sale. For further information apply to J. R. FAIN, Agriculturist.

FINE BOAR PIGS.

REGISTERED BERKSHIRES

sired by Thos. S. White's great Boar, UNCLE SAM, out of LADY WELSH II, a magnificent young Sow.

Reg. Dorset Ram.

TRANQUILITY, 10567 weight, 200 lbs; sell to avoid inbreeding. A sure sire of fine lambs. BLOOMFIELD STOCK FARM, J. H. Fraser, Prop. Cartersville, Cumb. Co., Va.

Berkshires.

3 registered Sows farrowed 31 pigs last week Sept. last, Sire Mason of Biltmore II, 58-548. Pigs are pure Biltmore blood. Price \$6 or \$11 pair at 10 to 12 weeks old. F. O. B. express here. Pair Beagle Hounds, 5 mos. old, \$10. ROBT. HIBBERT, Charlottesville, Va.

WALNUT GROVE FARM,

SHAWSVILLE VA.

Orders now taken for pure bred

BERKSHIRE PIGS.

to be delivered after December 1st. None but the best will be shipped, others go to the pen. One two-year-old Hereford Bull, registered, for sale, a perfectly formed animal, and as well bred as America's best, address all communications to W. J. CRAIG, Mgr., Shawsville, Va.

GLENSBURN

BERKSHIRES.

In this herd are twelve royally bred IMPORTED animals. Also selected American bred stock. Our IMPORTED boars Hightide Royal Victor and Loyal Hunter won first at Eng. Royal and Va. State Fairs, respectively. A splendid lot of pigs of gilt edged breeding now ready for shipment, Dr. J. D. KIRK, Roanoke, Va.

WANTED

20 FRESH HEIFERS. Must be good Size. CHAS. VIERS, Rockville, Md.

duct of the Department of Agriculture. This yellow bloom was of large size, probably ten inches in diameter, with very heavy petals, curving gracefully inward, making the bloom a perfect ball of gold. Secretary Wilson admired this flower so much that he directed that it be named "The Mrs. Roosevelt," in honor of the First Lady of the Land. The Department is making endeavors to produce a pink chrysanthemum of the same general size and texture of The Mrs. Roosevelt. If their experiments are successful and they produce this flower next fall, no doubt it will be named "The Alice Roosevelt." At any rate it is Secretary Wilson's desire to grow a flower to be named for Miss Roosevelt. There were some 160 varieties of chrysanthemums exhibited, with probably 1,000 blooms. Acridosity in the plant line was one specimen on which grew eighteen different varieties of this fall flower—yellow, red, pink, brown, white, and their intermediate shades. This was accomplished by grafting branches of standard kinds onto the stem of a hardy sort.

American corn is being threatened in Europe. It appears, according to a report from Consul Diedrich, of Bremen, Germany, that grain dealers in Europe are complaining that the grain upon arrival is frequently found in a wretched condition—damp and overheated, moldy and filthy. Purchases heretofore have been made on certificates of American boards of trade and Chambers of commerce, but now in order to rectify the deplorable condition a number of dealers contemplate taking the matter in hand and remedying the evil by buying, not according to certificates, but solely on the condition that the grain be found of good and sound quality when delivered in the European markets.

During the ten months ending October 31, 1905, the United States exported 86,762,984 bushels of corn, with a value of \$47,170,961, as against 36,998,921 bushels during the same period of 1904, the latter having a value of \$20,141,392.

Admiral Dickens during the sham bombardment of Fort Monroe, smiled one morning as a sailor staggered past him with a bale of hay on his back.

"He makes me think," said the Admiral, "of another sailor, a British one, whom I saw one day at Gibraltar.

"He, too, had a load of hay, and was toiling with it up from the little fishing village that lies at the foot of the great rock. I talked with him a little while, and, as we parted, I said:

"Who are you, my man? What job do you hold here?"

"Well," the sailor answered, as he took up the hay again, 'I used to consider myself a British bluejacket, but I'm dashed if I don't begin to think I'm a commissary mule.'"

BERKSHIRE PIGS.

I offer a limited number of the finest Pig I ever raised from my Biltmore Sows. Also a few Boars ready for service. B. B. WATSON, Stuart's Draft, Va.

Large Yorkshires, English Berkshires.

I have a lot of beautiful pigs of each breed, eligible to registry, for sale. H. D. COLEMAN, Ivy Depot, Va.

Choice Berkshires.

Boars ready for service; Sows safe in pig. JERSEY BULLS ready for service in Spring; all from high-bred Reg. Stock and can be gotten at reasonable prices. EVERGREEN FARMS, W. B. Gates, Prop., Rice Depot, Ft. Edw. Co., Va.

Berkshire Pigs

of the best breeding, for sale; fine individuals, prices right. Also M. B. TURKEYS, a few B. P. ROCKS and S. C. B. LEGHORN Cockerels for sale. J. T. Oliver Allens Level, Va.

BERKSHIRE BOARS

I offer some exceedingly choice young boars for sale; by Imported Danesfield Tailor, 76490 and out of Biltmore bred sows. It will be hard to find better or cheaper stock

HENRY WARDEN, Fredericksburg, Va.

THOROUGHBRED

Berkshire Boars, Jersey Bull Calves, Dorset Buck Lambs.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centreville, Md.

BERKSHIRE BOARS

eligible to registry, 10 mos. old, \$12; 2 mos. old, \$5.

M. B. TURKEYS: toms, \$3; hens, \$2; S. C. B. LEGHORN cockerels, \$1. All stock pure bred, nothing handled but the choicest and only in limited number. Price includes crating and delivery at Depot. Terms cash. W. A. WILLEROY, Sweet Hall, Va.

Registered P. China Berkshire

C. Whites. Large strain All ages mated not skin, 8 week pigs. Bred sows. Service boars, Guernsey calves, Scotch Collie pups and poultry. Write for prices and free circulars.

K. F. HAMILTON, Cochranville, Chester Co. Pa.



Chester Whites

Fall pigs, 6 to 8 weeks old, \$5 each, new ready for delivery; 3 Boars ready for service \$7 each: 1 Extraordinary Gilt, \$20.

S. M. WISECARVER, Rustburg, Va.

Mention THE SOUTHERN PLANTER in writing.



FARMERS IMPROVE YOUR STOCK and POULTRY. DO NOT DELAY. ORDER NOW. I have 1, 300 lb. 2 year old Shropshire Ram, Imported, Price \$60.

One each SHROPSHIRE, SOUTHDOWN, and DORSET 15 months Rams, weight 175 lbs., each. Price \$25.00 each, if unsold. Ewes bred to the Best Imported Rams and a few Good Lambs yet to offer. All eligible to registry.



Choice 2, 3, and 4 months POLAND CHINA, BERKSHIRE and CHESTER WHITE Pigs in pairs and trios not related. Service Boars of the best breeding and each one a perfect type of the respective Breed. Bred Sows due to farrow in Jan. Feb. and March. Now is the time to buy and have Pigs for Spring Shipment. MY CONCENTRATED SWINE POWDER will improve your pigs and save you feed. 5 pound package \$1.00. It is highly concentrated and will make 25 pounds of the best Hog Conditoner known. (CHICKENS and TURKEYS are going fast. Order at once as prices will advance rapidly after Dec. 10th. I have the finest lot of Princess Strain WHITE LEGHORN COCKERELS to be had anywhere. Large Lot of Famous Laying BARRED ROCKS and S. C. BUFF ORPINGTONS. Also the best WHITE PLYMOUTH ROCKS and WHITE WYANDOTTES to be found anywhere. I have many other breeds including BROWN LEGHORNS, PARTRIDGE and BUFF COCHINS, RHODE ISLAND REDS, BLK. MINORCAS BRAHMA* and many others. Write me your wants. I can supply them. Order what Mammoth Bronze and White Holland Turkeys you want early in December. Three 25 to 30 lb. Yearling Bronze Toms at \$7.50 each. Young Bronze Toms from 15 to 20 lbs at \$5.00 each. Hens \$1.00 each. White Hollands same price as Bronze. There are not quite as large as the Bronze but are more domestic, and for this reason are preferred by many who have small farms. Pekin and Rouen Ducks \$7.00 per trio of two Ducks and one Drake if taken at once. Eggs for hatching in season. Write your wants today. Satisfaction guaranteed and references furnished. Address, JAMES M. HOBBS, 1321. Mount Royal Avenue, Baltimore, Md.

Poland China Pigs

Some fine ones, young sows bred, young boars and pigs. No better breeding in the United States. My herd boars have been sired by J. H. Sande, Lookmover. Perfect I know. Proud Perfection, Corridor and High Roller, the greatest prize winners of the breed—my sows have been as carefully selected.

RED POLLED CATTLE. Fine good young bulls. Will sell a few cows and heifers. **ARROWHEAD STOCK FARM, Charlottesville, Va., SAM'L B. WOODS, Propr.**

POLAND CHINAS

with the business hams. The best to be found at farmer's prices. Herd headed by two great Boars. The Sows are great producing matrons, being bred from great producers. Boars ready for service. Glits open and bred. Fall pigs that are dandies. Young M. B. Toms (about 20 lbs.) at prices that will move them. A. GRAHAM & SONS, Overton, Albemarle Co., Va.



ORCHARD HILL

PURE BRED POLAND CHINAS. 5 fine young boars ready for service; 5 beautiful sows ready to breed; several litters of choice pigs. Also an 8 months old Guiney Bull whose dam tested 426 lb. butter in one year. **F. M. SMITH, Jr.**

R. F. D., 4, Charlottesville, Va.



Poland Chinas

Bargains: Pigs from Reg stock; 2 year old Reg. Boar and Bred Sows. Pedigree furnished. Order early, could not supply demand last Spring; Customers in several States write for prices and testimonials.

W. B. PAYNE, CROFTON, VA.

DUROC JERSEY PIGS

from the most noted Western winning strains, five to seven months old. Before buying pigs of any breed write us.—**LESLIE D. KLINE, Vaucluse, Va.**

BASE OF ALL WEALTH.

Agriculture has always been, and will continue to be, the basic foundation of wealth, and when allied with the factory it reaches its highest development. In this country and Germany these two sources of wealth are nearer together than in any other. England is a vast workshop, but food supplies to a large extent come from the outside. As long as England could make goods and sell to countries depending solely upon the soil, she prospered, but the feeling is arising in the colonies and in other countries that English domination of trade is no longer a fact. America, as the present administration now distinguishes the United States, is now entering upon its greatest era of manufacturing which is certain to have beneficial influence upon agriculture. Our shops now rival those of England and as they continue to increase the land must produce at an increased ratio to supply our industrial demands as well as to furnish a share of food for the hungry of other countries. The best arable land of the country is already taken up. The problem is more intensive and intelligent cultivation and the application of water to the land in the arid states.

CARE OF THE FACE.

You would not try to shave with a rip saw, would you? Then don't use ordinary soaps to make a lather for shaving. Such soaps are not suited to the delicate tissues of the face, and are bound to make it sore and rough and uncomfortable. Use the soap made especially for shaving, the very best, made by the J. B. Williams Co., Glastonbury, Conn. If you wish to try a sample of Williams' Shaving Soap, send your offer in another column. Remember that nature has given you but one face and it is up to you to take care of it.

CHOICE

O. I. C. PIGS

Eligible to registry and first class Boars ready for service, \$10.00 each, 3 mos. pigs either sex, \$5.00 each. Poland China pigs eligible to registry, \$5.00 each. None but good ones shipped.—**A. G. HUTTON, Lexington, Va.**

YES I HAVE A FEW FINE

Duroc Jersey Pigs

now ready to ship. \$8 each 815 pair.

Wm. G. OWENS, The Cedars Farm, Midlothian, Va.



Salt Pond Herd. DUROC JERSEYS.

PAUL J., 21625, son of Oom Paul, head of herd. Sows by Red Kover, Jumbo, Longfellow and other noted hogs. A choice lot of Pigs at reasonable prices, ready to ship. **S. A. WHITTAKER, HOPESIDE, VA.**

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Woodland Farm has a few of the best rams it has ever offered. Wool is an item worth considering this year, and our rams are exceptionally heavy shearers, besides having excellent mutton forms. **J. E. WING & BROS., Mechanicsburg, O.**

ELLERSLIE FARM—

Thoroughbred Horses

AND

Shorthorn Cattle, Pure Southdown Sheep and Berkshire Pigs.

For Sale, **R. J. HANCOCK & SON, Charlottesville, Va.**

Louisa, Va., Oct. 10, 1905.

I appreciate the Southern Planter and would not like to miss a single copy.

W. R. GOODWIN.

DO YOU WANT A BEAUTIFUL COLORED PICTURE OF OUR \$180,000 STALLION?

DAN'S WORLD RECORDS

Mile Record	1:55 1/4	High Wheel Record	2:04 1/4
Unpaced Mile	1:58	Two-Mile Record	4:17
Half-Mile Record	1:56	Half-Mile Track	2:01
Mile Track Wagon	1:57 1/4	And Canadian Half-Mile	
Half-Mile Track Wagon	2:05	Track Record	2:06

Dan Patch has paced 36 miles in 2:01 1/4 to 1:55 1/4 and he has paced 9 miles that averaged 1:57 1/4.

Unequaled by all other pacers and trotters, in the history of the world, combined.

Dan Patch never paced behind a wind shield because such records are not allowed. Statements to the contrary are made by people who are ignorant of Malions.

DAN BROKE Six World Records within 8 months from the time he commenced to eat "International Stock Food" for 3 Cents for One Cent's. It always gives my animal better Direction and Assimilation, Purser and Richer Blood and Permanently Strengthens and Builds Up the Entire System. Dan Patch eats it every day and his marvelous strength, endurance and speed has astonished the entire world. "International Stock Food" always gives paying results for Horses, Cattle, Sheep, Goats, Hogs, Colts, Calves, Lambs, Pigs, and is extra good for stallions, brood mares, breeding cattle or brood sows. It is absolutely harmless even if taken into the human system. Our Stallion Dan Patch 1:55 1/4, Directum 2:04, Arion's 2:04, Roy Wilkes 2:06 1/4, Ed Patch 2:05 1/4, Buttonwood 2:17 and our one hundred high class brood mares and their colts on our "International Stock Food Farm" eat it every day. Prepared from Medicinal Roots, Herbs, Barks and Seeds.

DESCRIPTION OF OUR NEW PICTURE

We have a beautiful Colored Lithograph of our World Famous Champion Pacing Stallion Dan Patch 1:55 1/4. It is made from the above Photograph and is as natural and life like as if you stood on the track and saw Dan coming toward you. This Photograph was taken by our own artist and shows Dan flying through the air at 1:55 1/4 and with every foot of the ground and being driven by Harry Horey who drove Dan in his wonderful mile in 1:55 1/4. This Large, Beautiful, Colored Lithograph gives all of Dan's records with dates and is one of the "Finest Motion Picture Pictures" ever taken. It is also 16 by 24 and is worthy to hang on the wall of any home or office as it makes an extra fine picture for framing. It costs only \$5.00 to get the first edition but you can have one absolutely free. Every Farmer or Every Stockowner should have a picture of Dan Patch 1:55 1/4, the Fastest Harness Horse The World has ever seen and the only harness horse to ever command an offer of \$100,000, which we received this year for Dan Patch and promptly refused.

DAN PATCH IN SIX COLORS MAILED FREE

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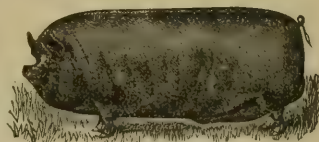
THE KITCHEN GARDEN.

If the average gardener of to-day would make a combination of the care, patience and labor which his grandfather put upon the kitchen garden, with the splendid variety of fruits and vegetables which science and plant breeding have made available to-day, we would have more of wholesome table food the year round and less of poor canned stuff.

The farm gardens, "market gardens" and "truck gardens" of to-day are the producers of a multitude of "miscellaneous vegetables" almost unknown fifty years ago. In the census of 1890 the large increase in garden products was recognized, and a systematic count of their bulk and value was made. It is possible, therefore, to make a ten-year comparison of the increase of such products, and this records the remarkable increases from 190 per cent to 400 per cent in the five several divisions of the country. The North Atlantic States had a well developed industry in "garden products" before 1890, which accounts for 190 per cent in 10 years, while the population increased only a trifle over 20 per cent is amazing.

"SWELLDOM" among BERKSHIRES.

Imported KINGSTONE POETESS, Imp. LUSTRE'S BACHELOR, Imp. INFANTER (World's Fair Winner), Imp. ELMA CLERRE, Imp. LOYAL MASON, Imp. SIR JOHN BULL 1st, Imp. SIR JOHN BULL 2nd, and a host of others, including the now fashionable PREMIER blood which swept the blue ribbons at the World's Fair, at St. Louis. I refer you to Mr. F. S. Springer, Secy. Am. Berk. Assn. Springfield, Ill., as to whether I own the above strains and fully 20 more. All sizes and sexes for sale cheap. TOWELS PEKIN DUCKS—"Whoppers," PLYMOUTH ROCK, S. C. B. LEIGHORN Cockerels, PIT GAME Pullets and hens. THOS. S. WHITE, Passifera Stock & Poultry Farm, Lexington, Va.



SIR JOHN BULL.



Edgewood Stock Farm. DORSET SHEEP.

The first fruits of the flock arrived in October this year. We never took more pains in mating and we must have better ram lambs than ever before. As long as we desire your trade, we shall export the Dorset in contrast to its own Virginia. If you are in the lamb business you must have Dorset blood. We will back your orders right now for Spring delivery. With best wishes for the breeders of the golden hoof,

Sincerely,
H. B. ARBUCKLE, Greenbrier, Co., Marlinton, W. Va.

Could our great-granddaddies, who thought tomatoes poisonous, and our great-grandmothers, who grew them as ornamental plants in window pots, under the attractive name of "love apples," come back and realize that over thirty million bushels of the pretty poisonous vegetables, according to a statement in Harper's Weekly, are eaten as a common and healthy food, they would surely realize that time works wonderful changes. An interesting statement is that the lettuce crop of the South has so increased that in the spring of this year North Carolina sent twenty carloads of that vegetable North in a single day.

Thirty-five years ago celery was a rarity, even on hotel tables, and was used by few families, even of wealth. To-day it is a common edible, occupying thousands of acres in Michigan, Ohio and New York. One firm has celery farms in Michigan, Florida and California, and because of the variety of seasons it is engaged in shipping celery by the carload the whole year round. Twenty-two million bunches of radishes and twelve million bunches of asparagus are the figures given for the crops of these vegetables.

ROOM FOR EVERYONE.

Food produced by irrigation will not disturb products and prices in the rain belt states for the reason that it will be largely consumed in the mines, lumber mills and other industries certain to spring forward in the mountain districts, rich as many of them are with undeveloped material resources, the production of which will add to the general welfare of the whole country. We are too big and our interests are now so closely identified that no part of the Union can prosper or suffer without every other part being more or less affected. While we produce more farm stuff than any other nation, yet our methods are wasteful and the art of agriculture as it is known and practiced at the best of the experiment stations is not understood by toilers who in many cases look with disfavor upon what they term "book farming," expounded through bulletins and other forms of printed matter. Persons in no other calling in any country are supplied free of cost with so many useful and valuable publications as are the American farmers.

GUY E. MITCHELL.

Olinger, Va., Aug. 9, 1905.

I have been reading the Southern Planter for some time and don't see how I could do without it. Success to the Planter!

J. V. YOUNG.

Dunkirk, N. Y., Sept. 5, 1905.

I have been very much pleased with the Southern Planter, and wish more people realized its value to any one interested in Agricultural matters.

R. W. TRAVIS.

SLOAN'S LINIMENT

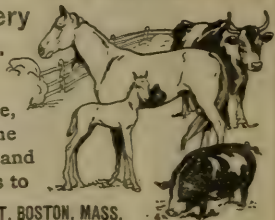
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DR. EARL S. SLOAN, 615 ALBANY STREET, BOSTON, MASS.



Baron Premier 3rd 75021,



the head of our herd, was first in his class at World's Fair; weighs 900 pounds at 22 months. His dam is litter-mate to Lord Premier, 50001, selling recently for \$1500; his sire was premier champion winner at World's Fair at St. Louis. With this great hog and a large line of both imported and American well selected sows and gilts, especially chosen to mate with him, we are actually producing and accomplishing the pleasure of breeding the most magnificent strains of BIG, LONG, WIDE, DEEP THICK-SET BERKSHIRE HOGS on short legs.

We are now offering a few bred sows and gilts and some three months

pigs. It makes no difference how fine hogs you desire to purchase, you need not go farther than

MAPLE SHADE FARM

W. H. COFFMANN, Propr., Bluefield, W. Va.

FOREST HOME FARM

OFFERS

BERKSHIRES

Of choicest breeding and individuality. Write for what you want.

Forest Home Farm,

Purcellville, Va.



We POSITIVELY GUARANTEE to breed any ship the very best strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING, Proprietor of the Bridle Creek Stock Farm, Warrenton N. C.

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Large White Yorkshires.

LARGE WHITE YORKSHIRE PIGS from prize winning families for sale. Herd headed by imported boar, "Holywell Huddersfield" No. 450 (A. Y. C.), second prize at Yorkshire Show, England 1904. These pigs are the English Bacon breed: they are prolific breeders, economical feeders, and hardy of constitution. During the month of August the two farrowing sows, imported Sweetest Polly (A. Y. C.), gave birth to 17 pigs, and the sow imported Holywell Empress (A. Y. C.), gave birth to 14 pigs. Orders will now be received for boars and sows from these and similar litters. Also a few boars fit to head any herd at reasonable prices.

Reg. Guernsey Cattle.

REGISTERED GUERNEYS—Herd headed by imported Top Notch, 9023 (A. G. C. C.), a son of Imported Itchen Beda advanced Reg. No. 136, assisted by Mainstays Glenwood Boy, 7607, A. G. C. C. (son of Jewell of Haddon), advanced Reg. No. 92. This herd is rich in the blood of Mainstay, Rutila's Daughter, Imported Honoria (Guernsey Champion, first prize at St. Louis), the Glenwood, Imported May Rose and imported Masher families. Bulls only for sale. No cows for sale.

Dorset Horn Sheep.

DORSET HORN SHEEP.—Flock headed by the Imported Ram, "Morven's Best," No. 4132 (C. D. C.); first prize at the English Royal 1904. A few ram lambs for sale.

Flocks and herds may be viewed by appointment.

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Everything Shipped on Approval.



SOUTHERN POETS.

(Number 10.)

Mary Washington.

A few years before the Civil war, a poem entitled "Charity" and credited to a London Journal went the rounds of poem entitled "Charity" and credited our papers, but it has been proved that this poem was originally published in "The Mississippi" (Jackson, Miss.), under the proper name of the authoress, Miss Ada Reedy. Somehow, it made its way to England where it was reproduced as an original contribution to a London magazine; then it was copied again in American journals, and greatly applauded. The authoress, Miss Ada Reedy, of Lexington, Miss., wrote this poem whilst in her teens. She was born in Alabama, but her father moved from that State in her infancy. During the war, she married Mr. Vance, of Kentucky. I subjoin the poem in question.

CHARITY.

When you meet with one suspected
Of some secret deed of shame,
And for this, by all rejected,
As a thing of evil fame;
Guard thine every look and action,
Speak no word of heartless blame,
For the slanderer's vile detraction,
Yet may soil your goodly name.

When you meet a brow that's awing
With its wrinkled lines of gloom,
And a hauty step that's drawing
To a solitary tomb.

Guard thine actions: Some great sorrow

Made that man a spectre grim,
And the sunset of to-morrow,
Friend, may leave you like to him.

When you meet with one pursuing
Paths the lost have entered in,
Working out his own undoing
With his recklessness and sin
Think, if placed in his condition,
Would a kind word be in vain?
Or a look of cold suspicion,
Win you back to hope again?

There are spots that bear no flowers,
Not because the soil is bad,
But that summer's genial showers.
Never made their bosoms glad.

All of our pigs old enough to ship are sold, and we are now booking orders for Jan. and Feb. delivery, for pigs sired by our two great boars, LUSTER'S CARLISLE OF BILTMORE, No. 7267, and MASTER LEE OF BILTMORE, No. 7373, and out of sows weighing from 500 to 600 lbs. each, in only fair breeding condition. LUSTRE'S CARLISLE was 2 years old on June 4th, weighs 720 lbs. and is as active as a 6 months old pig.

He is sired by ROYAL CARLISLE No. 65313, dam TOPPER'S LUSTRE, No. 54923. MASTER LEE was 1 year old on June 6th and now weighs 525 lbs. He is sired by LOYAL LEE 2ND. OF BILTMORE, No. 65632, dam IMPORTED DANESFIELD MISTRESS, No. 76327. LOYAL LEE 2ND is undoubtedly the champion Berkshire boar of the world, having more prizes to his credit than any other boar living or dead. DANESFIELD MISTRESS is a daughter of DANESFIELD HUNTRESS, No. 68173, who has an unbroken record of first prize at all the leading English shows, with the one exception, and then being defeated by her daughter DANESFIELD MISTRESS. We consider MASTER LEE one of the greatest young sires in America, and expect to prove it in the show rings next fall. In order to show our confidence in what we offer and insure satisfaction to our customers, we will ship pigs ON APPROVAL, and if they are not entirely satisfactory in every respect, you can return them at OUR EXPENSE. In other words you can see the pigs before you buy. Can always furnish pigs not akin. We are offering a few choice gilts bred to MASTER LEE for April farrow. For full particulars, Address, WOODSIDE STOCK FARM, R. S. Farish, Prop., Charlottesville, Va.

BERKSHIRES.

Boars ready for service. Sows to farrow in November and December.

Pigs in pairs and trios not akin.

GUERNSEYS. Several fine young bulls.

JERSEYS. A few handsome heifers and calves.

B. P. ROCKS. A fine lot noted for breeding in pairs, in trios and for breeding in pens.

TOULOUSE GEESE and PEKIN DUCKS. A few pairs of fine ones.

Prices Low.

M. B. ROWE & Co.,

Fredericksburg, Va.

LARGE YORKSHIRES.

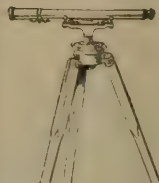
The most profitable breed. They are more prolific and will grow faster and make more and better bacon than any other breed. Pigs for sale at all times.

JERSEY CATTLE.

The Bowmont Farms' herd now numbers 100 head, and is composed of the best animals that money could secure, and for high testing Cows, surpasses any herd in America. Bulls and Heifers constantly for sale.

Address BOWMONT FARMS, Salem, Va

Farm Levels, Road Levels, Architects Levels, etc.



Levels especially designed for TERRACING, DITCHING, DRAINAGE, IRRIGATION, RICE CULTURE, and also for ROAD BUILDERS, CONTRACTORS, etc. Levels with all the latest improvements and that are simple, durable, accurate and also very easy to adjust, correctly and to operate. Prices range from \$5. to \$35. depending on the attachments, size of telescopes, etc.

We build the level that suits your purpose and that will satisfy you in quality and price. Write for our complete catalogue and let us show you their several advantages.

BELYEU LEVEL CO., Alexander City, Ala.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Better have an act that's kindly,
Treated sometimes with disdain,
Than by judging others blindly,
Doom the innocent to pain."

Amongst Mrs. Vance's poems, there is one equally as beautiful as the above, perhaps even more so. It is entitled "The Sisters, Love and Sorrow," and under the form of a fine allegory, teaches the truth that in all mortal life, love and sorrow are twin sisters, inseparable and that it is for the good and elevation of our immortal part that it should be so.

Mrs. Vance has been a large contributor to journals in the North and Southwest. At the beginning of the Civil war, she had a volume of poems ready for the press, but deferred publication on account of the time being inopportune. I have never heard of her poetical works appearing in book form since the war, so I hazard the conjecture that she has probably published, in detached form, in the various periodicals to which she has contributed.

Miss Clara Victoria Dargon, of South Carolina has been highly praised by Timrod, especially for one of her poems on the estrangement of two lovers. I subjoin the last six stanzas.

"Then back to the world, Jamie,
Laughing went I.
There never was a merrier laugh
than mine,
What fool could not dance me, what
eye out shine?
Puir fool, laughed I."

"But I am weary 'o mirth, Jamie,
'Tis hollowness 'a,
And in these long years sin' we were
parted,
I fear I'm growin' aye colder hearted,
Than you thought ava."

I have many lovers, Jamie,
But I dinna care,
I canna abide all the nonsense they
speak,
Yet I'd go on my knees on arrow's
grey peak
To see you ance mair.

I long for you back, Jamie,
But that canna be.
I sit all my time by the ingle at e'en
And think of those sad words, "It
might have been,"
Yet never can be.

Do you think of the past, Jamie?
Do you think of it now?
Twad be a bit comfort to know that
you did,
Ah! Sair wad I greet to know that you
did,
My dear, dear Jamie."

The Scotch language lends itself so well to pathos that Miss Dargon has greatly enhanced the effect of her poem by using that language. It is

MONTVIEW STOCK FARM,

(CARTER GLASS, Owner.)

GREATEST BOAR OF ENGLAND!

Mr. Geo. F. Weston, for years Superintendent of Biltmore Farms, wrote The Southern Planter that

MANOR FAITHFUL

was THE GREATEST BERKSHIRE BOAR TO BE FOUND IN ENGLAND. Manor Faithful, and his phenomenal son, Montview Faithful, head our herd.

Greatest Sow in America!

Mr. W. R. Harvey, formerly a widely known Western breeder, now manager of Filston Farms, Maryland, writes as follows under recent date: "You have a great young Boar in Montview Faithful, and in HER MAJESTY YOU HAVE THE BEST IMPORTED SOW IN AMERICA."

For Immediate Sale.

We have two splendid young Boars sired by Montview Faithful out of largest brood sow in our herd; also two young gilts same litter.

Address:

MONTVIEW STOCK FARM, P. O. Box 513, Lynchburg, Va.

ANGORA GOATS.

Buy Your Bucks for Fall Breeding now

and buy them from our Blue Ribbon (first premium) flock. We took the Blue Ribbon in every class in which we showed at the Lynchburg Inter State Fair, also most of the Red Ribbons.

Order at once as we are now booking orders for Fall Delivery and there will not be any left inside the next 30 days.

We are offering the following Choice Bucks at extremely low prices:

10 Fine Registered Bucks at \$10. each.

12 High Grade Bucks at 12.50 each.

8 Fine Young Bucks at \$10 each.

A FEW DOES FOR SALE.

DIAMOND V. RANCH, Rock Castle, Virginia.

Do You Ship Apples?

If so, let us call your attention to the California and Oregon apple boxes, the coming packages for nice apples, particularly for foreign shipments.

SOUTHSIDE M'T'G CO., PETERSBURG, VA.

Water Supply for Country Homes

PUMPS WATER BY WATER POWER.

RIFF AUTOMATIC HYDRAULIC ENGINE

No Attention. No Expense. Runs Continuously.

Complete System Extending to Stable, Greenhouse, Lawn, Fountains and Formal Gardens.

Operates under 18 inches to 50 feet fall. Elevates water 30 feet for every foot fall used. Eighty per cent efficiency developed. Over 5,000 plants in successful operation. Large plants for towns, institutions, railroad tanks and irrigation Catalogue and estimates free.

RIFF ENGINE CO., 126 Liberty St., N. Y.



POLAND CHINAS.

THE BIG KIND and the PRIZE-WINNING KIND.

PIGS, BOARS and BRED SOWS for sale at greatly reduced prices in order to avoid crowding in winter quarters.

Herd Boars now in service are D'S CORRECTOR, 98157, a superb individual, bred by Winn & Mastir, of Kansas, and a half brother to the Senior Champion Boar at the St. Louis World's Fair. Half interest in the sire of D'S CORRECTOR sold for \$2,500. My other herd boar, BIG JUMBO, Vol 27, O. P. C. R., was sired by the 1100 lb. hog, PERFECT I AM, 50767, and out of the 700 lb. sow, LADY P. SANDERS, 79040. BIG JUMBO was bred by W. S. Powell, of Kansas, and will, I believe, make a thousand pound hog at maturity.

SAISFACTION GUARANTEED OR STOCK MAY BE RETURNED AT MY EXPENSE. REFERENCES and TESTIMONIALS FURNISHED.

J. F. DURRETTE, Birdwood, Albemarle County, Virginia.



said that this poem drew tears from Timrod's eyes.

Amongst those who have written occasional poems, without devoting themselves strictly to the poetic muse, I might mention Miss Ella F. Mosby, and Miss Virginia Cabell Gardner, both of Nelson Co., Va., the latter being the niece of the former Miss Mosby (whose death occurred September 1st, 1905), had a very scholarly turn of mind and her naturally fine intellect was highly improved by study and culture. She wrote extensively in various provinces of periodical literature, stories, sketches, essays, reviews, poems, etc., besides publishing a charming volume on "The Ideal Life," in which she treats very interestingly of the influence which ideals have both on National and individual life. I submit a fine poem written by her.

"THE BUILDING OF THE HOUSE."

(From an Eastern Fable.)

Spacious and wide and fair, a temple grand,
Arose beneath the workmens' busy strokes,
Watching its growth by day, the curious folks,
Gathered in crowds from all the adjacent land.

By night the temple silent stood and dark,
Not one of all the multitude remained
Only a Fakir whom some need constrained,
Chances to pass and on a sudden,—hark!

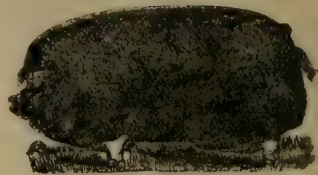
Voices in bitterest reproach and woe,
The wall and tools did with each other wrangle,
"Why dost thou thus my polished smoothness
O thou sharp nail! Why pierce and thrust me so I mangle?"

To whom the nail replied with biting scorn,
"Fool! hear the hammer with fierce blow on blow.
Tis not my fault, but his, the cruel foe,
Who me doth chase and smite from early morn."

POLAND-CHINAS.

I have a limited number of Pigs by my Victor Boars, Gray's Big Chief, 57077

and Victor G. 57075, and can furnish pairs not akin or related to those previously purchased. Young Boars and Sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address J. B. GRAY, Fredericksburg, Va.



GRAY'S BIG CHIEF, 57077

POLAND CHINA

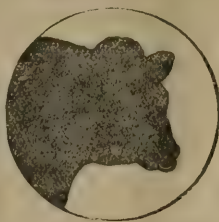
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TAMWORTH PIGS

entitled to registration; also bred Sows at reasonable prices.

APPLY TO

J. C. GRAVES, Barboursville, Orange Co., Va



The Delaware Herd of

ROYAL ANGUS CATTLE

is not surpassed either in breeding or individual animals by any herd in the East. At the head of our herd is

PRINCE BARBARA, 68604,

the son of the great \$9,100 Prince Ito. Females of equally choice breeding. Write your wants remember, we take personal care of our cattle; keep no high priced help; incur no expense of exhibiting, all of which enables us to offer stock at equitable prices. Send for pamphlet.

MYER & SON, Prop.,

Bridgeville, Del

SUNNY HOME HERD

Aberdeen Angus Cattle.

Those bull calves I have for sale are STRICTLY CHOICE. The low, blocky sort, true Angus.

Remember they are sired by one of the last and best sires of the great Gay Blackbird (the greatest sire of herd bulls ever in America.) They will please you.

Write A. L. FRENCH,
R. F. D. Byrdville, Va.

P. S. Am sold out of heifers but will spare a few good young cows to go with bulls.



Farmers and Live Stock Dealers

If you have any kind of Live stock to sell send it to me—Catle, Sheep, Lambs, Calves or Hogs. I guarantee highest market value according to quality. Sales made quickly and returns promptly. Strict personal attention given to the sale of every animal. I pay just as much attention to a single head as I do to car lots. Write me when you wish to know the market on anything in my line. I give accurate information as to prices and conditions of our market.

ROBERT C. BRAUER, Richmond, Va.

COMMISSION SALESMAN OF CATTLE, HOGS, SHEEP, LAMBS, AND CALVES.

Address: P. O. BOX 204. Pens and Offices: Union Stock Yards. Long Distance Phone. Phones Nos. 993 and 5059:

In turn the hammer, "Who is wielding me?
Who driveth me on stone and iron hard?
Go, if thou needst must chide, rude and ill starred.
Go, chide at man, the Master builder he."

No farther ran my fable, but me thought
The ear that listens still in wonder hears
Curses and vain reproach and bitter tears,
O House of Life! in wall and tower inwrought."

Yet heavy blows shall weld what else aloof
Long had remained, unused and incomplete,
And when the threshold knows the Master's feet
No more is heard of wraeh or sharp reproof.

Miss Virginia Gardner also writes excellent short poems and sketches, as well as occasional poems of a high order. I send you one in which she strikes a noble keynote.

"THE GIFTS."

"Life, thou wast rich with promises;
What dost thou give?
What precious boon hast thou to show and say,
"Take this and live."
For when the glory lay on all blue hills,
On rocks and trees,
Thou saw'st the beauty of the coming years,
Behold in these.

"Or when the air was full of rushing wind,
Or rain's soft symphony,
Thou saw'st these utter great, mysterious things
That are to be."
"Now give. Give love, perhaps. But
"no" life soul,
Though love must be,
And love is fair, ay wondrous fair is love,

OAK HILL FARM

SADDLE AND THOROUGHbred HORSES,
ABERDEEN-ANGUS AND JERSEY CAT-
TLE, BERKSHIRE, POLAND-CHINA, Duroc
JERSEY AND TAMWORTH HOGS - - -

White Plymouth Rocks, White Holland Turkeys, Pekin Ducks
and Pea Fowls. Eggs in Season.

SATISFACTION GUARANTEED. WRITE FOR PRICES.

Shipping Point, Oak Hill, (station on farm) D. & W. Railway 15 miles West of Danville, Va.

SAM'L HAIRSTON, Wenonah, Va.

The Grove Stock Farm

Holstein-Friesian Bulls.

Two 2 years old
One 1 year old
Four 6 mos. old

Will sell them cheap to make room for others.
Prices includes registry and transfer to buyer.

T. O. SANDY, Prop. Burkeville, Va.

HOLSTEIN FRIESIAN

A choice lot of young stock for sale; some young bulls ready for service and bull calves sired by DEKOL 2D, BUTTER BOY, 3D, No. 2, and SIR PAULINE CRADDOCK, whose breeding and individuality are unsurpassed.

Also a nice lot of BERKSHIRE PIGS, Biltmore and Filston strains.

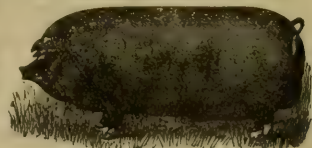
Before buying, write us what you want. FASSITT BROS., Sylmar, Md.

REGISTERED POLAND CHINAS.

I can now furnish some choice pigs out of some of my best brood sows and bred from some of the most noted and popular western strains. For style and finish they are UP-TO-DATE.

Prices reasonable.

W. M. JONES,
Crofton, Va.



"'Tis not for thee."
 "Then Fame. Oh life, since thou deniest me Love,
 Let me have Fame.
 Sweet were the voices of praising multitude
 That spoke my name."

"So the grand pity in the face of Life
 But few there are,
 (Alas how very few) who climb that height,
 Lofty and far."
 "Still Joy is left for me. 'Child dost thou know
 How Joy is brief,
 None may the birth right of the race forego,
 And that is grief."

"Not Love, nor Fame nor Joy! What gift is left,
 Worth to take,
 Not one! no single one. Life, get thee gone,
 Let my heart break."

Life smiled a noble smile. "The best of all,
 To all I give.
 Duty and use. These are the gifts I bring,
 Take these and live."

FARQUHAR PEA HULLER.

The Farquhar Pea Huller is a strongly made and securely put together machine for the hulling of peas and beans. It has a guaranteed capacity of from ten to fifteen bushels per hour. It is simple in construction and easy to operate, having an arrangement by which it can be run either by hand or light power.

It will pay every farmer who raises peas or beans, no matter how small the quantity to investigate the merits of this machine. The price it sells for puts it within the easy reach of all. By writing to the manufacturers, A. B. Farquhar Co. (Limited), York, Pa., full description, with proofs of its labor-saving and money-earning qualities, how it will pay for itself in one season's use, the wonderful results obtained by those now using the Farquhar Pea Huller and the amount of special discount this company offers to introduce the first machine in each locality, will be sent by return mail. When writing also ask for their free catalogue of engines, boilers, saw mills, threshers, grain drills and other agricultural implements.

Big Rock, N. C. Oct. 10, 1905.

I take five other farm papers but the Southern Planter is the best I have ever taken—better than all five together.

J. P. JONES.

Williamsburg, Va., Oct. 25, 1905.

The Southern Planter is the best farm paper I know of.

F. J. ROSS.



ACTOR 26th, 1905

INGLESIDE HEREFORDS

Owned by S. W. Anderson, Blaker Mills, Greenbrier county, W. Va.

A choice lot of BULLS, COWS, and HEIFERS for sale. Also a few POLAND HEREFORD BULLS recorded in the National Polled Hereford Records. Write for catalogue and prices. Farm near Alderson, W. Va., on the C. & O. R. R. Telegraph and Telephone office, Alderson W. Va.

BACON HALL FARM.

Hereford Cattle.

Entire herd for sale, 26 head. Will price to move them.

Muscovy Ducks==Toulouse Geese.
 MOTTO: "Satisfaction or no sale."

E. M. GILLET,
 Glencoe, Baltimore county, Md.

HEREFORD CATTLE

HIGH CLASS HERD.

PRICES VERY REASONABLE.

EDWARD G. BUTLER, "ANNEFIELD FARMS,"

Berryville, Va.

Best English and American strain
BERKSHIRE HOGS.



Grand Champion Prince Rupert, No. 79539.

Send for our History of Hereford Cattle, It's Free.

If you have as many as 10 cows, you need a Hereford bull. We have the best to be had, both in breeding and individual merit at right prices. We have the best equipped plant in the South and East for the production of high class stock. The \$3500 ACROBAT stands at head of herd. We breed Berkshire hogs, and Hackney Horses.

Write us a letter now—you are loosing money by putting it off.

ROSEMONT FARM, Berryville, Clarke Co., Va.



ACROBAT 5840.

Pulls Stumps or Standing Trees.

Clears a two-acre circle with one sitting—pulls anything the wire rope will reach; stumps, trees, grub, rocks, hedges, etc. A man and a boy with one or two horses can run the

COMBINATION STUMP PULLER,

Stump Anchored or Self Anchoring.

A minute and a half is all it takes for the ordinary stump. No heavy chains or rods. Note the strong wire rope with patent coupler—grabs the rope at any point. Does not chafe rope; far ahead of old-style "take-ups." Smallest rope we furnish stands 40,000 lbs. strain. It generates immense power and it's made to stand the strain. We also make the Iron Giant Grub and Stump machine, the I. X. L. Grubber and Hawkeye Grub and Stump Machine. Write for free illustrated catalogue. Largest manufacturers of Stump Pullers in the World.

Established 1884.

MILNE MFG. CO.,
 634 8th St.,
 Monmouth, Ill.



GOOD HOUSEKEEPING.

Roast Turkey, with Oyster Dressing.

Wash the turkey well and rub it inside and out with salt. Plunge into boiling water and let it stay for five minutes; this plumps it. Make a dressing of dry bread crumbs, enough to fill the inside of the fowl as well as the crop, seasoned with one large spoon of melted butter, a teaspoon of sage, a teaspoon of celery seed, salt, pepper, two raw eggs beaten and a pint of oysters from which the liquor has been drained. Fill the bird, tying the neck to prevent the dressing from escaping. Put it in an iron pan and pour a quart of hot water over it. Add a small quantity of salt and two slices of raw middling with the liver and gizzard. Let it cook slowly for about five hours, turning and basting constantly. If it is a small turkey less time will be needed for cooking.

Baked Pig's Head.

After the head has been well cleaned, put in into a pot with enough water to cover and boil till the meat comes off the bones easily. Pick it off and chop, season with onion juice, salt, black pepper and red pepper and a dash of sage. Put it into a baking dish with a layer of crumbs in the bottom and a thick layer over the top with a few scraps of butter. Pour some of the liquor over it and bake slowly for a hour. It is well to put a tin plate over the dish at first, to prevent burning.

Sausage.

Take twelve pounds of the lean of the chine and cut it in thin slices or chunks. Six pounds of backbone fat cut into small pieces. Grind it twice through the sausage mill and season with five tablespoons of salt, five tablespoons of sage, two tablespoons of sweet marjoram, four tablespoons of black pepper, two tablespoons of thyme. Mix all the seasoning together then mix into the sausage. But do not work too much as this makes the sausage tough.

Cheap Fruit Cake.

Three heaping cups of flour, two cups of sugar, two cups of butter, six eggs, one-half pound of raisins, half-pound of currants, one-fourth of a pound of citron, one teaspoon of cinnamon, one teaspoon of nutmeg, one teaspoon of cloves, one wine glass of brandy.

Fruit Cake.

Two pounds of raisins chopped, one pound of almonds chopped, two pounds of currants, one pound of citron shredded. Twelve eggs, beaten separately, one pound of butter washed and creamed, one pound of sugar, one pound of flour.

Make the batter as for pound cake and before you add the fruit, stir in to it two teaspoons of cream tartar, dissolved in a little milk, one tablespoon of molasses with one tablespoon

YAGER'S LINIMENT

A first-class liniment is every family's need, in fact a necessity in every household and every stable. You never know what moment an accident is going to happen, and when it does, a good liniment is the first need, and you want one that is reliable, one that will do its work and do it well. YAGER'S CREAM CHLOROFORM LINIMENT is the one to be relied upon—it never fails. It is not one of those fiery, biting lotions, but its effect is soothing, gentle and stimulating to the nerves, causing energetic action of the blood vessels, thus promoting nature's processes of healing without interruption.

GILBERT BROS. & Co.,
Baltimore, Md.

Gentlemen—

I feel that you should know the benefits received from your YAGER'S CREAM CHLOROFORM LINIMENT. While in the army I contracted Rheumatism, and suffered a long time with that dreadful disease. After I was mustered out of service, I returned home and tried several remedies without getting any benefit whatever. I was induced to try YAGER'S LINIMENT; I did so, and was entirely cured. I cannot say too much for your liniment. With best wishes, I am,

Yours truly,
S. M. DANIEL,
Goldsboro, N. C.



GILBERT BROS. & Co.,
Baltimore, Md.

Gentlemen—

The Monongah Coal & Coke Co., for whom I am stockman, use 125 to 150 boxes and mules and I have used YAGER'S LINIMENT in their stables for years past, and have never known it to fail to cure. For months the veterinary surgeon worked on a horse with a severe case of swoeny without results, when three bottles of YAGER'S LINIMENT cured it. I myself was laid up for eleven months with rheumatism; seven months in bed; two bottles of YAGER'S LINIMENT put me on my feet.

Yours truly,
THOS. G. PRICE,
Monongah, W. Va.

For the cure of Neuralgia, Rheumatism, Sciatica, Stiff Joints, Pains in the Back, Sprains, Cuts, Burns, Sore Throat, Swellings, etc., YAGER'S LINIMENT never fails to relieve and cure, and is man's faithful friend. In the stable it is equally as effective and useful for the Horse in the cure of Sweeny, Collar Boils, Wounds, Cuts, Scratches, Wind Galls, Strains, Sore Joints, Etc.

Yager's Cream Chloroform Liniment

has stood the test of years, and gained its popularity by real merit, it can be had from any general merchant or druggist, at 25 Cents for a large bottle, made only by Gilbert Bros. & Co., Baltimore, Md. Insist upon having YAGER'S and take no substitute.

The Farmer's Best Friend

SAMPLE BROWN FREE FENCE

16 to 35 cts.

Per Rod Delivered

You can examine Brown Fence and learn just what it is before ordering or paying one cent. We mail you a sample showing size and quality of wire. When you get the sample, test it with a cold file and see how hard, tough and springy it is. File off the galvanizing and see how thick THAT is. All wires—both strand and stay wires—are No. 9 gauge, and made of the best grade of steel. Weighs 3 to 5 lbs. more to the roll than most fences, and

will last double the time. A more rigid, firm, stable, stock-resisting, time-defying fence was never made to post. Price 16c to 35c per rod, and we pay the freight on 40 rods or more. Write for catalogue showing 100 styles of fences. We also sell to farmers at lowest wholesale prices—Coiled Spring, Barbed and Galvanized Wire, Gates and Poultry Netting. Save money by ordering from us. Address

THE BROWN FENCE AND WIRE CO., Cleveland, Ohio.

of soda dissolved in it, one tablespoon of cinnamon, and one of ginger, and one of nutmeg, add by degrees the fruit, and a half teacup of good brandy. Bake in loaves for about five hours.

Currant Cake.

One cup of butter, two cups of sugar, half cup of milk, five eggs, four cups of flour, one pound of currants rolled in the flour, teaspoon of nutmeg, one teaspoon of soda, and two of cream tartar. Bake in patty pans and ice.

CARAVEN.

SURE HATCH,

Nebraska.

That's what Clay Center should be called!

Drop a letter in the mail-box anywhere addressed just "Sure Hatch, Nebraska," and it will go to the Sure Hatch Incubator Company, at Clay Center, as fast as steam and steel can carry it.

Every railway mail clerk and every postoffice official through whose hands the letter passes will know at once that its destination is Clay Center, Neb.

For the Sure Hatch Incubator Co. practically is Clay Center.

There is no other big industry located there.

Nearly everybody in town works for the Sure Hatch Incubator Co.

Its pay-roll keeps Clay Center going—keeps its population happy and prosperous. And Clay Center is proud of its famous industry, proud of the splendid reputation of the "Sure Hatch," proud of the men whose genius and industry have made this little town known and honored all over the civilized world.

You can easily find out for yourself that what we say is true.

If you are interested in Incubators and Brooders, just drop a line to "Sure Hatch, Nebraska," and say you would like to see a copy of the new Sure Hatch Catalogue.

You'll get it by return mail, without a doubt.

And when it comes, you'll find it the most interesting Catalogue you ever read.

There's no other Incubator Catalogue like it—none so chock full of interesting and valuable information about Incubators and Brooders, about the hatching and raising of chicks for pleasure and profit.

Try it today—send a postal addressed "Sure Hatch, Nebraska,"—say you want the Big Catalogue—and see what happens!

Montvale, Va., Uov. 13, 1905.

Don't fail to send the Southern Planter to me as long as I am "tickling" Mother Earth. It tells how and why and when and all about it.

D. H. THOMPSON.

Mention The Southern Planter when writing advertisers.

Ideal Country Homes.

Look at these Bargains.

A. 12½ acres fine fruit and trucking lands. Good seven-room house, with basement; fine well at door, another one at the barn; all necessary outbuildings; planted to most every kind of fruit. A splendid place for trucking. A stream of water crosses one end of the place. Price, \$3,000; half cash, balance to suit.

B. 10 acres adjoining above. One of the most commanding sites in Vienna. Entirely planted to apples, pears, peaches and cherries. Over one thousand young and thrifty trees on the place. Price, \$1,500; half cash, balance to suit. This ought to go with above, but will be sold separately.

No. 137. 450 acres at Clifton Station; 2 cottages and one tenant house on the farm; also 18-room hotel, with basement, that has been used for store-keeping; plenty of nice shade. This is a fine business place, a fine opening for the right man. The tract can be divided up into a number of small places. The hotel has done a fine business. Price, \$10,000; on easy terms. There is a fine, noted spring near the hotel.

No. 105. 38 acres; 30 clear, 20 in cultivation, the balance in wood; fine stream through the place 3 miles from railroad. Near school, church and store. Price, \$800. Terms to suit. This would make a cheap farm.

No. 106. 25 acres; all clear; 14-room house, in good condition; well at the door; barn and all necessary outbuildings; good fence; all kinds of fruit; ½ miles north of Vienna, near school, churches and store. Price, \$3,500 on easy terms. This is a fine, large house, in good condition; has beautiful shade; would make a fine summer boarding house.

No. 182. 35 acres near Arlington; 33 cleared and in cultivation, 2 acres in oak and other timber; four frame houses, two of five rooms and two of three rooms, barn, good wells. Five minutes' walk from the trolley car, ten

minutes' from schools, churches and stores. Price, \$15,000. Terms: All cash preferred. Will sell in tracts not smaller than five acres at \$500 per acre. This property would make very valuable building sites.

No. 107. A bargain. 17 acres. 10-room stone and frame house in good condition. Has all necessary outbuildings; plenty of good, pure water; has peaches and apples. Fenced with pickets and boards. Also a large saw and grist mill with hominy and crusher attachments; is run by water and steam power. Grist mill is 51 feet long and 42 feet wide, 3½ stories high; saw mill attached is 40x30, has a capacity of 2,800 feet a day. The mill is kept busy all the time; it is in a fine neighborhood. This is a fine opening for the right man. The reason for selling is that the owner is getting old and not able to do so much business. If sold right away will take \$3,500 for house, farm and two mills, or will exchange for smaller property.

No. 89. Fine blue grass farm. 500 acres; two sets of buildings; new 8-room house and cemented cellar. Old house has six rooms. Good well at the door of each house. Two good barns and all necessary outbuildings. 500 fruit trees; 11 good springs; well fenced; 45 acres in meadow; 30 acres in rye; 80 acres in good pasture; 65 acres for corn this year; one-half mile from school, church and store. This is a splendid place and is very cheap. Price, \$3,500.

No. 130. 13½ acres. 8 acres cleared, balance in all kinds of timber. Near Springfield station, old house, spring nearby, some fruit, two miles from school, church and store. Price, \$300, on easy terms.

No. 220. For sale. In Vienna, on easy terms, new 6-room house, reception hall, 3 porches and fine cellar, barn and other outbuildings, well on the porch, lot 10x80, all set out in peaches. Electric car stops near the house. This is a beautiful home. Would be fine for an office-holder. Let me show you this house.

Send for my new Catalogue of Bargains.

J. F. Ferman,
Fairfax, C. W., Virginia.

I Am the Paint Man

2 Full Gallons Free to Try—6 Months Time to Pay

I AM the paint man.

I have a new way of manufacturing and selling paints. It's unique—it's better.

O. L. Chase

Before my plan was invented paint was sold in two ways—either ready-mixed or the ingredients were bought and mixed by the painter.

Ready-mixed paint settles on the shelves, forming a sediment at the bottom of the can.

The mineral in ready-mixed paint, when standing in oil, eats the life out of the oil. The oil is the very life of all paints.

Paint made by the painter cannot be properly made on account of lack of the heavy mixing machine.

My paint is unlike any other paint in the world.

It is ready to use, but not ready-mixed.

My paint is made to order after each order is received, packed in hermetically sealed cans with the very day it is made.

NOTE.—My 8 Year Guarantee backed by \$50,000 Bond.

stamped on each can by my factory inspector.

I ship my pigment—which is white lead, zinc, drier and coloring matter freshly ground, after order is received—in separate cans, and in another can I ship my Oil, which is pure old process linseed oil, the kind that you used to buy years ago before the paint manufacturers, to cheapen the cost of paint, worked in adulterations.

I sell my paint direct from my factory to user at my very low factory price; you pay no dealer or middleman profits.

I pay the freight on six gallons or over.

My paint is so good that I make this wonderfully fair test offer:

When you receive your shipment of paint, you can use two full gallons—that will cover 600 square feet of wall—two coats.

If, after you have used that much of my paint, you are not perfectly satisfied with it in every detail, you can return the remainder of your order and the two gallons will not cost you one penny.

No other paint manufacturer ever made such a liberal offer.

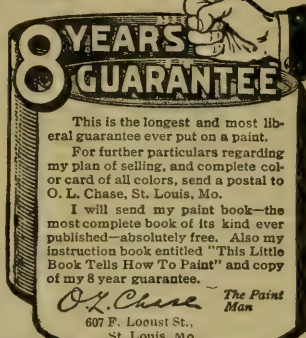
It is because I manufacture the finest paint, put up in the best way, that I can make this offer.

I go even further.

I sell all of my paint on six months' time, if desired.

This gives you an opportunity to paint your buildings when they need it, and pay for the paint at your convenience.

Back of my paint stands my Eight Year, officially signed, iron-clad Guarantee.



8 YEARS GUARANTEE

This is the longest and most liberal guarantee ever put on a paint.

For further particulars regarding my plan of selling, and complete color card of all colors, send a postal to O. L. Chase, St. Louis, Mo.

I will send my paint book—the most complete book of its kind ever published—absolutely free. Also my instruction book entitled "This Little Book Tells How To Paint" and copy of my 8 year guarantee.

O. L. Chase The Paint Man
607 F. Louist St.,
St. Louis, Mo.

KEYSTONE DEHORNING KNIVES.

For some time Mr. M. T. Phillips of Pomeroy, Pa., has been known as the proprietor of the Keystone Dehorning Knives, which have a wide reputation for being the best dehorning instruments manufactured. This season Mr. Phillips has introduced, for the first time, his improved Keystone Dehorner. This machine combines all the excellent features formerly possessed by the Keystone Dehorner, and, in addition, has some improvements which very materially add to its excellency, if such a thing be possible. He still continues to sell his Regular Keystone Dehorner and for the benefit of persons who insist upon having a cheap article, he has a very serviceable knife which he styles the "Convex" Dehorner. All of these knives are the best of their kind and will give excellent satisfaction. Anyone interested can obtain catalogs and further information by addressing Mr. M. T. Phillips, at Pomeroy, Pa.

Buchanan, Va., Sept. 11, 1905.

The Southern Planter is without equal in the South.

Durham, N. C., Sept. 8, 1905.

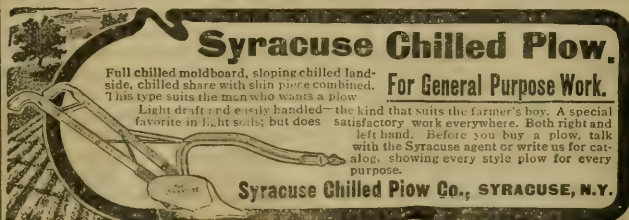
I am much pleased with the Southern Planter and don't know how I have gotten along without it all these years.

W. L. WALL.

"Paints that stay Painted."

PAINT is what you need. Do you know that PAINT will preserve and improve your property? PAINT will give your property a prosperous appearance. PAINT will increase the value of your farm. We have PAINT on hand for everything—PAINT for roofs and barns. LYTHITE COLD WATER PAINT. Carriage and wagon PAINT. Our "Standard" house PAINT is ready-mixed, and for the money no PAINT can surpass it. Write us for PAINT prices and color cards.

JOHN W. ATKINSON & CO.,
Richmond, Va.



Syracuse Chilled Plow.

Full chilled moldboard, sloping chilled land-side, chilled share with shin piece combined. This type suits the man who wants a plow.

Light draft and easily handled—the kind that suits the farmer's boy. A special favorite in light soils; but does satisfactory work everywhere. Both right and left hand. Before you buy a plow, talk with the Syracuse agent or write us for catalog, showing every style plow for every purpose.

Syracuse Chilled Plow Co., SYRACUSE, N.Y.

For General Purpose Work.

ST. NICHOLAS IN 1906.

Some of the Fine Things Promised for New Readers and Old.

It has seemed in years past as if St. Nicholas simply couldn't be any better; but every year standards advance and brains and hands grow more skillful in producing a magazine that delights young hearts. So a host of finer features than ever is promised for the coming year.

First, there will be Miss Helen Nicolay's "The Boy's Life of Abraham Lincoln," a vivid and striking story of a good and great man with whom every American boy and girl should make acquaintance. Miss Nicolay is the daughter of John G. Nicolay, one of Lincoln's private secretaries who, with John Hay, wrote the authorized life of Lincoln. Perhaps no one living is better qualified to write such a biography. "The Boy's Life of Abraham Lincoln" begins in the November number and runs through the year.

And this is only a beginning. Captain Harold Hammond has written more "Pinkey Perkins" stories for coming numbers of St. Nicholas. "The Crimson Sweater," by Ralph Henry Barbour, is a new serial story for both girls and boys. Still another serial story is "From Sioux to Susan." It is about a girl, but boys will like her. Ralph D. Paine, and Maurice Francis Egan, and Rebecca Harding Davis, and other favorites of young readers are at work on stories and sketches for St. Nicholas readers.

Then there is to be a series of stories of useful inventions—the bit of fairy land wrapped up in a match, for instance, or a stove, or a house, or a clock. S. E. Forman has dived deep into the magic of common things for the readers of St. Nicholas during 1906.

St. Nicholas League is fifty thousand strong, and growing fast. Its membership, its competitions, and its prizes are open to all young people on the simplest of conditions and without any cost. Another department, Nature and Science, is doing fine work in arousing a wholesome interest in Nature. There are other departments; there are always pictures and jingles and delightful sketches almost without end. The child who reads St. Nicholas is richer and happier for it all his life. Better begin with November, 1905. The Century Co., Publishers—Union Square, New York.

Charlotte C. H. Va., Sept. 19, 1905.

I could not farm successfully without the Southern Planter.

MRS. C. C. GUTHRIE.

"Gracious, Elsie!" exclaimed the girl's mother, "why are you shouting in that horrible fashion? Why can't you be quiet; like Willie?"

"He's got to be quiet, the way we're playin'," replied Elsie. "He's papa coming home late, and I'm you."



Fruit Trees 7½c

Why pay two prices for all kinds of nursery stock to cover agents' profits and bad debts, when we, by employing no agents and making no bad debts—selling for cash direct to the people at lowest wholesale rates—will save you half. Twenty-one years experience. 1,000,000 high class fruit trees, 50,000,000 strawberry plants. Special bargains in peach trees. Safe and cheap delivery anywhere in U. S. Catalogue free. Valuable book on fruit growing free to buyers.

Strawberry Plants

\$1.25 per 1000

Write to-day for catalogue. Mention this paper. Address
Dept. E, CONTINENTAL PLANT CO., Kiltrell, N. C.

Headquarters for Nursery Stock.

**WHOLESALE
AND
RETAIL.**

We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

Apples,	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc
Apricots,			

CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

... AGENTS WANTED. ...

FRANKLIN DAVIS NURSERY CO., Baltimore, Md.

..ELMWOOD NURSERIES..

—WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF—

APPLES, PEACHES, PEARS, CHERRIES, PLUMS, APRICOTS, NECTARINES, GRAPEVINES in large assortments, GOOSEBERRIES, CURRANTS, STRAWBERRIES, HORSE-RADISH, ASPARAGUS, DEWBERRIES, and an extra fine lot Raspberries. Splendid assortment ORNAMENTAL and SHADE TREES, ORNAMENTAL SHRUBS and HEDGE PLANTS.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per 13. Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

THE CENTURY IN 1906.

Mrs. Ward's New Novel and "Lincoln the Lawyer" Notable Features of a Promising Year.

Finer pictures than ever, more short stories, Mrs. Ward's new novel, new light on the life of Lincoln, are but a few of the strong features of the 1906 Century. Every year the art work in the magazines grows more exquisite. The Century has been notably successful in satisfactory reproduction of work having special adaptation to color printing, and has plans for many unique features in 1906. Christy's series of pictures of the American girl, in full color, will appear during the winter.

Jack London, Myra Kelly, Israel Zangwill, Jacob A. Riis, Alice Hegan Rice, and many other masters of the pen will have short stories in the 1906 Century. Anne Warner, whose "Susan Clegg" stories were a distinct contribution to American humor, has written a serial story for the volume. Mrs. Ward's new novel, "Fenwick's Career," begins in the November number—a notable event. To read Mrs. Ward's brilliant study of the gifted young Westmoreland painter, as it unfolds month by month, is a pleasure alone well worth the price of The Century.

Second, in interest and importance, only to Mrs. Ward's new novel is the study of "Lincoln the Lawyer," prepared by Frederick Trevor Hill, which will begin in the December Century and continue through the year. This description of the legal years of Lincoln's life will be scholarly, exhaustive, and of fascinating interest. In its preparation Frederick Trevor Hill, a New York lawyer and author of note, has been assisted by the Hon. Robert T. Lincoln, Hon. Robert R. Hitt, Hon. James Ewing, and other members of the Illinois bar and officers of the Illinois Historical Society.

For every man and woman who would keep in touch with the best in American literature, art, and thought, in every family, The Century is a necessity, not a luxury. If dollars must be counted, better deny a little elsewhere than go without The Century. Can you afford not to take The Century? Price \$4.00 per year. The Century Co., Union Square, New York.

GO OF PERUVIAN GUANO.

After a journey of 10,000 miles, with 4,000 tons of Peruvian Guano aboard, the British ship, Coya, Capt. Thomas, put into this port early yesterday morning and is now discharging her cargo at the Columbus Street wharf.

The present cargo is consigned to the Coe-Mortimer Company. The cargo will be discharged at the dock and will at once be put into 200-pound bags.

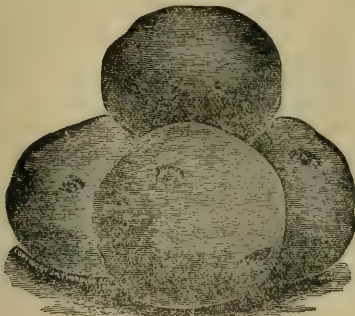
As is well known, Peruvian Guano is brought from islands about 40 miles

Two Highest Awards at St. Louis Exposition: Gold Medal for Seed and another Gold Medal for Vegetables.

Thorburn's Seeds

FOR OVER A HUNDRED YEARS HAVE BEEN UNIVER-
SALLY RECOGNIZED AS THE STANDARD of EXCEL-
LENCE.

Noroton Beauty POTATO.



This wonderful potato, introduced by us for the first time, last season, has borne out all claims we made for it. It has been universally praised and we expect a much greater demand for it this season. We offer it now at quite moderate prices. Send your orders in early.

OUR CATALOGUE the 105th successive annual edition—contains as heretofore, a more complete assortment of high class Seeds, etc., and fuller cultural directions than any other seed annual published. It is beautifully illustrated with the finest half tones, and contains 144 pages, and is in every respect and without exception the most complete, most reliable and the most beautiful of American Garden Annuals.

We mail it free to all interested in gardening and farming. Send for it.

J. M. Thorburn & Co.
36 Cortland St.,
NEW YORK.

Over one hundred years in business in New York City.

STARK FRUIT BOOK

44 pages 9x12 inches; 22 pages showing in natural colors 216 varieties of Fruit, with concise description and season of ripening of each; 64 half-tone views of Nurseries, Orchards, Packing Houses, etc. Send 50 cts. for book (post-paid) and Rebate Ticket permitting return of book by mail within 60 days and we refund the 50¢. Or, mail us within 1 year, Rebate Ticket with \$12 order for nursery stock and we will credit \$1.00 in part payment on your order and you keep the book free. WE PAY THE FREIGHT. We Pay Cash weekly and want more home and traveling salesmen. OFFER FREE.—Stark Bro's, LOUISIANA, Mo., Atlantic, Iowa, Fayetteville, Ark.

HEREFORDS

ENTIRE HERD.

DORSETS.

Sold to settle Estate.

H. ARMSTRONG, Lantz Mills, Va. — 99

off the coast of Peru, South America. Hundreds of thousands of pelicans, sea gulls and other sea birds subsist in that vicinity, and when night falls they roost on these barren isles. For countless years these immense flocks of birds have been roosting and nesting on these islands, and the accumulated excreta is now very deep, so deep in fact that it is dug out like coal.

In attempting to convey some idea of the multitudes of sea birds that live in the vicinity of these barren isles, one writer says, "their number is legion; they completely cloud the sun when they rise from their resting place in the morning in flocks of miles in length."

The pelican, like the pigeon, builds his second nest on the remains of the first, and the young add to the deposit. For years and years these inconceivably large flocks of sea birds have been nesting, roosting and dying on these islands, and ships are bearing the guano to every part of the world. In the guano one frequently sees petrified eggs, bones of sea birds, feathers, eggshells and other reminders of the birds.

It would seem that nature herself understood something of the value of these deposits, and that she has done what she could to preserve them. Rain never falls in that part of the country. In the past sixteen years only once has the rain descended. So none of the guano is washed into the sea. The birds live almost altogether on fish, and when they catch a denizen of the deep, they carry him to an island and there devour him. In this way the fish-scrap becomes a part of the deposit, and is one of the valuable ingredients of the fertilizer.

Mr. Edmund Mortimer, of Coe-Mortimer Company, recently visited the islands himself, and gives interesting accounts of the birds and their movements. Capt. Thomas stated yesterday afternoon that the deposits are by no means exhausted. He said that his cargo came from an isle that had never been touched save once. He left the isles on September 18, and encountered good weather during the voyage.—Charleston News & Courier, Nov. 18th, 1905.

The above cargo of Peruvian Guano is advertised in this issue by The Coe-Mortimer co.

Rutledge, Tenn., Aug. 24, 1905.
I do not want to miss a single copy as I feel that I cannot do without the Southern Planter.

W. F. LONG.

Virgilia, Va., Aug. 8, 1905.
I highly appreciate the Southern Planter, as it is invaluable to every farmer that will heed its instructions.
WM. M. PANNEBAKER.

Always mention the Southern Planter when writing advertisers.

THE EMPORIA NURSERIES

are offering fruit trees which their customers say are the finest they have laid eyes on, as follows:

APPLE, 2 and 3 yr. old, 5 ft. up, \$10 per 100; \$85 per 1,000.

PEACH, 1 yr., 4 ft. up, \$8 per 100; \$75 per 1,000.

PLUM, 5 ft. up, \$25c. each.

PEAR, 1 yr., 4 to 5 ft. (mostly Kieffer), 25c. each.

APRICOT, 5 ft., 25c. each.

CHERRY, 4 to 5 ft., 50c. each.

GRAPE, 2 yr. old, Concord, 10c. each; \$6 per 100.

STRAWBERRY PLANTS, Michels Early and Lady Thompson, 25c. per 100; \$2 per 1,000.

MULBERRY EVERBEARING, 20c. each or \$10 per 100.

CAROLINA POPLAR, fastest growing shade tree, 8 to 10 ft., 25c. each.

Apples are mostly late kinds; Winesap, Stayman's Winesap, Johnson Fine Winter, M. B. Twig, Baldwin. They are on ground we need and must be removed.

Send order for this Winter or book for Spring shipment.

Prices F. O. B., Emporia Freight or Express office, Stock fumigated according to the law of Virginia, clean and free from disease and a certificate on each shipment.

A TRIAL ORDER WILL CONVINCE YOU THAT OUR STOCK IS WHAT WE CLAIM FOR IT.

ALL STOCK THRIFTY AND BRIGHT.

EMPORIA NURSERIES, Emporia, Virginia.

W. T. HOOD & CO.,
OLD DOMINION NURSERIES,
RICHMOND, VIRGINIA.

Wholesale and Retail Growers of

High Grade Nursery Stock

Descriptive catalogue and price list on application.

Office: Chamberlayne & Rennie Ave. Nurseries: Henrico & Hanover Counties.

ORGANIZED 1832.

ASSETS. \$1,056,360.54

Virginia Fire and Marine

Insurance Company of Richmond, Va.,
Insures Against Fire and Lightning.

All descriptions of property in country and town, private or public, insured at fair rates, on Accommodating terms.

AGENCIES IN EVERY TOWN AND COUNTY.

W. H. PALMER, President.

E. B. ADDISON, Vice-Pres't.

W. H. McCarthy, Secretary.

CONTROLLING NATURE.

Everybody knows that of late years natural forces have been wonderfully subjected to man's need. We are dazzled by the spectacular achievements in steam and electricity but are likely to forget the less noisy but no less marvelous conquest of animal and plant life. Horses are swifter, cattle heavier, cows give more milk and sheep have finer fleeces than in days gone by. In plants the transformation is even more marked. People now living can remember when the number of edible fruits and vegetables was far less than at present and even those that could be grown were vastly inferior to what we now have. For example, our parents knew nothing of the Tomato except as a curious ornament in the garden. Sweet Corn was hardly better than the commonest field sorts. All oranges had seeds. Celery was little known and poor in quality pansy has replaced the insignificant pansy has replaced the insignificant Heart's Ease from which it was developed, and the Sweet Pea in all its dainty splendor traces its origin to the common garden vegetables.

This progress has been made in spite of the great tendency manifested in all plants and animals to go back to the original type. It is indeed a battle to keep strains pure and up to the standard they have already attained, let alone any improvement. The practical results are accomplished by men operating largely for love of the work, like Luther Burbank in California and Eckford in England as well as by the great seed merchants, D. M. Ferry & Co., of Detroit, Michigan who are not only eternally vigilant to hold what ground had been gained, but have a corps of trained specialists backed by ample means to conduct new experiments. The results of their experience can be found in their 1906 Seed Annual which they will send free to all applicants.

Springfield, Illinois, Nov. 21, 1905.

The Annual Meeting of the American Berkshire Association will be held in the office of the National Wool Growers' Association, on the second floor of the Purebred Record Building, Union Stock Yards, Chicago, Ill., Thursday, evening, December 21, 1905, at 7.30 o'clock.

As this meeting will be held during the week of the International Live Stock Exposition (Dec. 16th to 23d), it is earnestly hoped that you will arrange to attend.

Yours respectfully,
FRANK S. SPRINGER,
Secretary.

Littleton, N. C., Nov. 11, 1905.

I am greatly pleased with the Southern Planter and would much regret to be without it.

REV. J. M. RHODES.

Mention The Southern Planter when writing advertisers.



In Actual Use

Keen Kutter Quality tells in the actual use of the tool. Keen Kutter Tools are not retired by an occasional knot or tough piece of material. They are made to stand hard work and lots of it. They are as good as new after poor tools have gone to the scrap heap. The

KEEN KUTTER

brand covers a complete line of tools. In buying any kind of tool just see that the name Keen Kutter is on it and you have assurance of full satisfaction. Keen Kutter Tools have been Standard of America for 36 years and are the best that brains, money and skill can produce.

Some of the kinds of Keen Kutter Tools are: Axes, Hammers, Hatchets, Chisels, Screw Drivers, Auger Bits, Files, Planes, Draw Knives, Saws, Scythes, Tinners' Snips, Scissors, Shears, Razors, etc., and Knives of all kinds. If your dealer does not keep Keen Kutter Tools, write us and we will see that you are supplied. Every Keen Kutter Tool is sold under this Mark and Motto:

"The Recognition of Quality Remains Long After the Price is Forgotten."

Trade Mark Registered.

SIMMONS HARDWARE COMPANY,
St. Louis, U. S. A. 298 Broadway, N. Y.
Send for Tool Booklet.

No. 6
Iron Age
Combined
Double
and Single
Wheel
Hoe,
Hill and
Drill
Seeder

Four of the Famous

No. 1
Iron Age
Double
and Single
Wheel Hoe

workers that have made the Iron Age line of farm and garden implements known all over the continent. You can make more money this year than last if you will decide now to let them help you. Look at the good points of

Iron Age Implements

Figure out how much time, work, seed, fertilizer, &c., you might save with a very small outlay, by buying Iron Age implements. They have won their way by honest performance of every promise. Write for free book.

BATEMAN MFG. CO.,
Box 167,
Crenloch, N. J.

Improved Robbins
Potato Planter.

No. 40 Iron Age
Pivot Wheel Cultivator.

NITRATE OF SODA.

Editor "Southern Planter,"
Richmond, Va.

Dear Sir:—There have been several cases recently of low grade Nitrate appearing on the market, and I am writing you to advise your correspondents to purchase Nitrate from trustworthy dealers only.

The more usual adulterants are common salt, and salt cake from the manufacture of acids, both worthless as fertilizers and containing no plant food.

It is preferable to purchase Nitrate in original bags which now contain about two hundred pounds against the old three hundred and ten pound bag which was very clumsy.

I hope that you will be able to cooperate with us in helping to prevent the sale of low grade Nitrate which we greatly deplore.

So far as the producers are concerned, however, the greatest care is taken, and samples are drawn by inspectors from all cargoes before they leave the Ports of Chile, and fines are imposed upon producers who attempt to ship low grade Nitrate.

Salt cake residue made as a by-product in the manufacture of Nitric Acid is also used at times to adulterate Nitrate of Soda and in some cases has been sold as such; of course, it is worthless as a food for plants. It is frequently called Nitre-Cake, which name gives it a false value from the farmer's standpoint.

On our part we have done all that is possible to keep up a high standard, and that our policy will be the same in the future you may be fully assured.

Very truly yours,
WILLIAM S. MYERS,
Director.

Editor Southern Planter:

I received your note enclosing one from Mrs. _____ in reference to my mistake about James B. Hope's burial place. In reply I would state that my authority is Mrs. Col. Moore, daughter of the poet. In a memoir she has written of her father, she says: "In his early years Old Hampton claimed him. He became the son of the city of his adoption and sleeps among her dead"—Possibly his remains were afterwards moved to Norfolk. The volume from which I have quoted is called "A wreath of Virginia bay leaves" and contains a memoir of the poet and about 50 of his poems.

M. W. EARLY.

Lynchburg, Va., Oct. 9, 1905.

The Southern Planter is too good to do without.

JNO. A. LEE.

Warminster, Va., Oct. 13, 1905.

The Southern Planter is the very best agricultural monthly in America.
A. Q. HOLLODAY.



The Prosperous Farmer

has a right to be buoyant, because he carefully prepares his lands at seed-time, and uses liberally EVERY season

Virginia-Carolina Fertilizers,

which bring at harvest-time large, excellent crops—for which the very highest prices are obtained. They come up to and often exceed our guaranteed analysis.

If you don't fertilize with these popular brands—you fail to obtain the best results from the care and labor put on your crop, whether it be trucks or any one special product of the soil. If your dealer cannot supply you—write us for information.

VIRGINIA-CAROLINA CHEMICAL CO.,

at any one of these cities:

Richmond, Va.
Norfolk, Va.
Durham, N. C.

Charleston, S. C.
Atlanta, Ga.

Savannah, Ga.
Montgomery, Ala.
Memphis, Tenn.



W. A. Miller & Son,
1016 Main St. Lynchburg, Va.

—DEALERS IN—

Seeds, Fertilizers and Wool.

SEEDS. We sell every kind of seed for field and garden of best quality, and as low as same qualities can be bought in any market.

FERTILIZERS. We sell Fertilizers for every crop, under our own brands. All who have used our High Grade Tobacco Guano, Corn Grower, Wheat and Grass Fertilizers, Pure Raw Bone, and High Grade Acid Phosphate, analyzing from 14 to 16 per cent., pronounce them the best they have used.

WOOL. We buy all the year round, and PAY THE HIGHEST MARKET PRICES.

Farmers wishing to purchase will find it to their interest to see us before buying.

BIG PROFITS in Farm Poultry

If you raise it right. Mark the "B" and let us start you right with a new 1906-Pattern

Standard Cyphers Incubator

"the sensation of the poultry world," guaranteed to hatch more and healthier chicks with less oil than any other or your money back. We mean it. 90 days trial. Complete Catalogue and Poultry Guide, 28 pages, (4x11) Free if you mention this paper and give addresses of two near by poultry raisers. Write nearest office.

CYPHERS INCUBATOR CO., Buffalo, Boston, Chicago, New York, Kansas City or San Francisco.



SAVE BOB WHITE.

From all sections of Virginia, a scarcity of Bob White is reported.

The farmer should protect this game bird for his insectivorous qualities and also for the reason that if good shooting is to be had he can easily entertain shooting parties who will pay liberally for their pleasure.

A movement has been started by the sportsmen of Richmond to collect a fund to be expended in hawk-traps, which will be distributed in the counties east of the Blue Ridge. A special appeal is being made to the sportsmen of the cities and towns to raise this fund as the country sportsman will do his share in seeing that the traps are set. Some few of various species of hawks are beneficial to the farmer and if such are caught they could be easily liberated. Since the placing of these traps will certainly be the death of many hawks, it comes well in the province of your valuable paper to tell your readers which of them should not be killed.

This movement should also interest many of your readers who are lovers of song and insectivorous birds on whom certain species of hawks are known to prey.

It is hoped all in sympathy with methods of destroying hawks will give us financial assistance; also give us the benefit of their ideas as to how to make the work effective.

M. D. HART.

No. 2 N. 9th St., Richmond, Va.

(We are glad to note the above movement. We do not know just how effective it will be, but it is sure to do good. We bespeak for Mr. Hart the liberal support of our readers.) S. P. P. Co.

Greenville, Me., Mar. 27, 1904.

Tuttle's Elixir Co.,

Dear Sirs.—I have used your Elixir and find it a first class remedy for all and more than it is recommended for. It is ahead of anything I ever used for colic. I have witnessed several bad cases it has cured in less than twenty minutes, and for scratches it can't be beat.

Please send me one of your Veterinary Experience Books; if there is any charge I will remit the price.

Yours truly,

W. P. SPENCER.

Confidence, W. Va., Nov. 11, 1905.

I expect to take the Southern Planter as long as I live, or can raise the fifty cents..

C. M. FARRAR.

Don't buy a docked horse. Cruelty to animals has no right for recognition in farm life.

When corresponding with our advertisers, always mention The Southern Planter.

PERUVIAN GUANO

A Complete Natural Manure.

We have imported during the 1904-1905 fertilizer season over 30,000 tons of this splendid natural manure, a large part of which was sold in the Southern States.

PERUVIAN GUANO is a natural manure, free from all chemical treatment, and not only contains a high percentage of plant food in the choicest forms, but a larger quantity of organic matter which improves the condition of your land.

We are importing this Guano from two deposits at Lobos de Tierra. That from the older of the deposits contains a high percentage of phosphoric acid, while the Guano from the more recent deposits runs high in ammonia.

The following analyses represent about the average from these two deposits:

Cargo Ex. S. S. Coya.	Cargo Ex S. S. Cella
9.30%.....	Ammonia 3.55%
2.28%.....	Potash 4.30%
9.50%.....	Phosphoric Acid..... 22.40%
28.02%.....	Organic Matter..... 14.36%

PERUVIAN GUANO, being a natural product, every cargo from the same deposit varies slightly, but the above analyses represent average cargoes. We shall be glad to supply exact guaranteed analysis of each cargo and to refer buyers to our nearest agent, or, if we have no agent in their locality, quote them prices f. o. b. at their nearest shipping point.

We have just gotten out a 76-page book on the "home mixing" of fertilizers, entitled PLANT FOOD PROBLEMS.

This book contains full information in regard to the various materials used as fertilizers; gives the formulas best suited to different crops and tells the farmer how he can buy the raw materials and mix his fertilizers at home, thereby saving at least five dollars a ton.

A request by postal addressed to our Charleston office will place this book in your hands.

Peruvian Guano a Superior Base for Home Mixtures.

Peruvian Guano is a material that commends itself strongly as the best possible base for home mixtures. By its use, the necessity for using a large number of materials in compounding is entirely done away with. Such materials as ground bone, tankage, dry ground fish, dried blood, sulphate of ammonia, etc., are not needed since the Peruvian Guano supplies all the plant food elements furnished by these materials, in choicest forms, and already intimately mixed and combined by natural processes.

In addition to PERUVIAN GUANO we import Nitrate of Soda, Nitrate of Potash, Muriate of Potash, Sulphate of Potash and Kainit, which materials we sell ex vessel on arrival at lowest prices.

Trusting that you will decide to at least give PERUVIAN GUANO a trial and inquire our prices on other fertilizer materials before placing your order, we are, respectfully yours,

THE COE-MORTIMER COMPANY
(FORMERLY EDMUND MORTIMER & CO.)

333 BROAD STREET, - - CHARLESTON, S. C.

FATE OF METHUSELAH.

We thought nothing new could be derived in the way of Bible criticism, but here is a poser asked by a correspondent of the New York Times: "According to the Bible, Methuselah begat Lamech and lived 782 years thereafter. Lamech lived 182 years and begat Noah. Noah was 600 years old when the flood occurred. Was Methuselah drowned?" It is distressing to contemplate the discussion this will engender, but no doubt there are many who can clear up the mystery.

NOW IS THE TIME TO PAINT.

Of all seasons of the year, there is no question in our mind but that the Fall season is really the ideal time to do house and barn painting.

On another page of this paper we are printing the advertisement of O. L. Chase, The Paint Man, who sells his paint direct to the user from his factory, giving two full gallons free to try, and allowing six months in which to pay for it.

Mr. Chase, with this new selling plan, and with his new method of manufacturing paint, certainly has a very attractive proposition. His paint is put up in separate cans; his "Oilo"—which is old-fashioned pure linseed oil, being sent in one can, and his paint pigments ground to order, on the day the order is received, and sent in another can, this can be dated the day that it is put up by his factory inspector. This insures an absolutely fresh, made-to-order paint.

Manufacturing his paint this way enables Mr. Chase to give an eight-year guarantee—and he backs this guarantee with a fifty thousand dollar bond. All in all, O. L. Chase, The Paint Man, makes a remarkably liberal offer, and has the correct principle in manufacturing paint. He gets out a splendid paint catalogue, and also issues some small books, one of them entitled, "This little book tells you how to paint." All of his printed matter is very interesting, and before buying paint, we certainly recommend our subscribers to write Mr. Chase, The Paint Man, for printed matter on the question of Fresh Paint. His address is

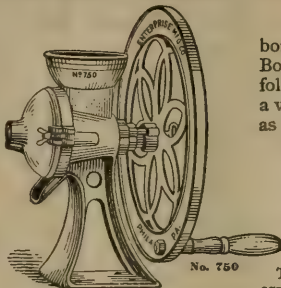
O. L. CHASE, THE PAINT MAN,
607 F. Locust Street,
St. Louis, Mo.

REX BOOK.

Rex Book, The Veterinary Guide, is an exhaustive treatise, just off the press. It contains 160 pages and more than 150 illustrations, with attractive cover. It treats, from the experienced Veterinarians point of view, nearly every subject that could possibly be of interest to the owners of Horses, Cattle, Hogs, Sheep and Poultry.

Any reader of The Southern Planter can secure a copy free by sending to The Rex Company, 800 So. 16th St., Omaha, Nebraska. The book weighs nearly a pound.

Grind Your Own Poultry Food



These mills are good general mills for all farmers and poultrymen, being strong, compact, made of excellent material. Especially adapted to grinding dry bones, shells, corn, roots, bark, grain, chicken feed, etc. Bone meal fertilizer can be made with them. Capacity $1\frac{1}{4}$ bushels of corn per hour. Weight 60 lbs. Mill shown in cut \$8.50. Look for the name "Enterprise." Full information on request.

THE ENTERPRISE MFG. CO. of PA., 333 Dauphin St., Philadelphia, Pa.

You can put a few cents' worth of dry bone, old shells or corn into an Enterprise Bone Mill, and it will increase in value tenfold. There's no food so good for poultry as a variety, nor a way to save money so easily as to grind your own poultry food, using

ENTERPRISE

Bone, Shell and Corn Mills

FREE

SILK REMNANTS

800

These Silks are from the
Richest Product
of
Domestic and Foreign Looms
In All The Shades.

To quickly introduce into this country the celebrated Oriental Arabian Perfumes, we offer 800 extra large genuine Silk remnants **ABSOLUTELY FREE** to everyone answering this advertisement. We also send at once free a package of perfumes. Address: **ORIENTAL PERFUME CO., New York City, 27 Third Ave., Dept. 132 ps**

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THE END ROLLING TRAY WALL TRUNK

CHRISTMAS PRESENTS

No use worrying about what to get your friend or loved one.

One of our nice TRUNKS, BAGS, or SUIT CASES, makes an idea, gift.

A New Idea in Trunks.

Usefulness, Simplicity, Durability, and economy combined. You get them brand new direct from our FACTORY to your HOME at WHOLESALE price. Price from \$4 up. Sold under GUARANTEE. Money refunded if not perfectly pleased.

Buy where your dollars will go the farthest. Drop us a postal and return mail will bring you our illustrated Catalog. Do it now.

H. D. THACKER & CO., Petersburg, Va.
SOLE MANUFACTURERS.
ESTABLISHED 1894.

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Tubular butter brings 25 to 35 cents. Cream is worth only one cent for stock food. Yet many farmers have no separator—only half skim their milk by setting—lose 21 cents on cream fed to stock—and wonder why dairymen don't pay. **Tubulars stop this loss. Tubulars get the last drop of cream out of the milk—make big profits. Tubulars are the only modern separators. Notice the low can and enclosed gears. Write for catalog S-29.**

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The Baby Cream sells on sight. Keeps children's skin perfect. Cures every trouble. Gives instant relief. Elegantly Perfumed. Delicately medicated. Antiseptic. Snow White. Ladies use it on themselves. Keeps their skin like velvet. Circulars tell all about it.

Write at once and earn this elegant Safety Box.

BRAUER CHEMICAL CO., 426 Postal Building. N. Y.

AGRICULTURAL EXHIBITS BEING MADE BY THE RAILROADS OF THE SOUTH AT NORTHERN STATE FAIRS.

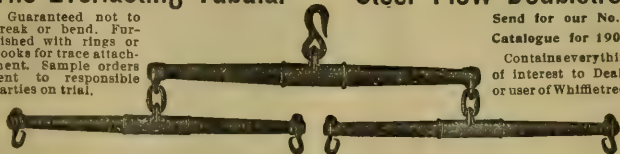
As a result of a conference between the heads of the Land Departments of the Southern Railway and the Norfolk and Western Railway last summer, it was decided to make a line of exhibits at the different Northern Fairs this fall, and accordingly, representatives were sent out by Mr. Richards of the Southern Railway, and Mr. LaBaume, of the Norfolk and Western Railway, equipped with a full line of attractive crop samples, including wheat, oats, other grains and grasses, and fruits and vegetables. In addition to this, an abundant supply of literature was distributed. The exhibits were installed in attractive tents surmounted by large banners calling attention to the wonderful opportunities in the South.

The Southern Railway exhibited with great success at the Ohio State Fair, Columbus, the New York State Fair, Syracuse, N. Y. the Interstate Fair, Trenton, N. J., and the Bloomsburg Fair at Bloomsburg, Pa. Their exhibits attracted wide interest and elicited considerable surprise on the part of the Northern farmers who had no idea that such excellent products could be produced in the Southern territory. Their fruit exhibit, particularly, was the recipient of much flattering commendation and they were highly congratulated everywhere upon their ability to come North and make such excellent showing right in the heart of the best fruit growing section of New York and Pennsylvania.

The Norfolk and Western exhibit was also very attractively arranged in a new oblong tent of considerable dimensions. The grains and grasses were displayed around the walls of the tent and above them large pictures framed in glass, representing familiar Virginia farm and crop scenes, were hung. The fruit and vegetable products were arranged on tables on the

The Everlasting Tubular

Guaranteed not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.



Steel Plow Doubletree

Send for our No. 8 Catalogue for 1905.

Contains everything of interest to Dealer or user of Whiffletrees.

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Also manufacturer of Farm Wagon Doubletrees, Neck Yokes and Singletrees.

Pittsburg Tubular Steel Whiffletree Company,

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THE SEABOARD AIR LINE RAILWAY

OFFERS
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INVESTMENTS

THE MANUFACTURER,
THE STOCK RAISER,
THE DAIRYMAN,
THE FRUIT GROWER,
THE TRUCKER.

TO

WHERE YOUR LABOR IS NOT IN VAIN.

Would a country where work can be carried on the entire year and where large profits can be realized interest you?

THE SEABOARD Air Line Railway traverses six Southern States and a region of this character. One two-cent stamp will bring handsome illustrated literature descriptive of the section.

J. B. WHITE, EDW. W. COST, CHARLES B. RYAN,
Gen. Industrial Agt., Portsmouth, Va. Traffic Mgr. Gen. Pass. Agt., Portsmouth, Va.
W. T. HUGHES, President, Louisville, N. C. C. S. WOOD, Vice-President, Clarksville, Va.
M. L. T. DAVIS, Sec. & Treas., Norfolk, Va.

When corresponding with our advertisers always mention the
SOUTHERN PLANTER.

center of the tent, and an abundant supply of literature was within easy access.

The Norfolk and Western exhibit started at Tiffin, Ohio, went from there to Fort Wayne, Ind., and then to La Crosse, Wis., and at all points created a great deal of favorable comment, and in addition aroused much interest in Virginia and her agricultural possibilities, as is evidenced by the correspondence which continues to flow in from the sections in which these exhibits were made. A hearty welcome was manifested by the Fair officials at all points, and a few of the letters recently received from the Secretaries and Presidents of the Fair Associations are herewith appended:

Ft. Wayne, Ind., Oct. 9, 1905.
Mr. F. H. LaBaume,

Agl. & Indl. Agent, Roanoke, Va.
Dear Sir.—I wish to compliment you on your display at the Fair held here recently. It impressed me as such an ideal way to come in contact with the farmers, especially the younger element, that I could not refrain from congratulating you upon your success.

Yours truly,
THEO. WENTZ, Vice Pres.,
German-Amer. Bank, Fort Wayne, Ind.

Posteria, O., Oct. 7, 1905.
La Crosse, Wis., Oct. 8th, 1905.
Mr. F. H. LaBaume,

Agl. & Indl. Agent, Roanoke, Va.
Dear Sir.—It is unquestionable that an agricultural exhibit such as you displayed here, of the products and Industries of the State of Virginia, was of great value to all whose pleasure it was to witness same and listen to your talks bearing on the subject. I feel that you created a very favorable impression, and it seems to me that this is one of the best methods to show the people in general just what your state has to exhibit.

Thanking you cordially for making same, and with the hope that you will be with us again next year, I m,

Yours very truly,
L. M. JORSTAD, Asst. Secy.,
La Crosse Inter-State Fair Association.

As the Northern farmer becomes more thoroughly conversant with the exceptional advantages offered by the Southern States, he is turning his attention more closely this way, and the increasing number coming down on every excursion is ample testimony to the fact that the South is coming into her own, agriculturally as well as industrially.

These exhibits are a factor of very vital importance in the education of the Northern farmers with regard to what the South has to offer him, and it is sincerely hoped that a large number of the other Southern roads will

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STANDARD FOR 14 YEARS.

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Contains no tar or paper; will not melt, or tear. Acid fumes will not injure it.

Outlasts metal or shingles. Any handy man can apply it.

There is only one Ruberoid Roofing, and we sell it. You can verify its genuineness by the name on the label and on the under side of every length of Ruberoid Roofing. Send for samples and booklet

A large stock of Corrugated and V. Crimp Roofing always on hand.

Southern Railway Supply Co.,
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RICHMOND, VA.



Steel Roofing, \$1.50 Per 100 Sq. Feet

Painted red both sides; most durable and economical covering for roofing, siding or ceiling, for barns, sheds, houses, stores, churches, cribs, poultry houses, etc.; easier to lay and cheaper than any other material; no experience necessary to lay it—a hammer or hatchet the only tools you need. At this price to all points east of Colorado, excepting Oklahoma, Texas and Indian Territory. At this price we furnish our No. 15 semi-hardened flat steel roofing, sheets 24 inches by 24 inches, at \$1.00 this same material corrugated as shown in illustration, or in "V" crimped, or standing seam, at 50 cents per square advance over above prices we will furnish this material in 6 and 8 feet long; \$2.25 for brick siding or beaded ceiling or siding. Send us your order for immediate shipment. Time will prove its enduring qualities. It withstands the elements the best of all coverings. Ask for further particulars. **WRITE FOR FREE CATALOGUE NO. A. M. 100** on building material, wire, pipe, plumbing material, furniture, household goods, clothing, etc. We buy at **SHERRIFFS' AND RECEIVERS' SALES**, 100,000,000 feet of lumber from the World's Fair.

CHICAGO HOUSE WRECKING CO., 35th and Iron Sts., CHICAGO, ILL.

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all one-cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost—portable, stationary or traction. Mention this paper, SEND FOR CATALOGUE. **THE TEMPLE PUMP CO., Mrs. Mesher & 15th St., Chicago.** **UNTIL YOU INVESTIGATE "THE MASTER WORKMAN,"** a two-cylinder gasoline engine superior to any wagon at small cost—portable, stationary or traction. **THIS IS OUR FIFTY-SECOND YEAR.**

join this movement next year by making four or five exhibits each, and thus be able to cover the entire Northern territory simultaneously during the Fair season to excellent advantage.

In this connection, it behooves us to suggest that the several Southern States also make some effort to establish exhibits in the North and West, or, better still, to install an attractive exhibit in a car well arranged for the purpose and then send it on a tour into the West and Northwest. These traveling exhibits have been a great factor in the development of the Western States and will also accomplish much for the South.

THE "SUN"
(Baltimore, Md.)

Now sells for 1 cent, and can be had of every country dealer, agent or newsboy at that price.

The Sun at one cent is the cheapest high-class paper in the United States.

The Sun's special correspondents throughout the United States, as well as in Europe, China, Japan, the Philippines, Porto Rico, Cuba and in every other part of the world, make it the greatest newspaper that can be printed.

Its Washington and New York bureaus are among the best in the United States, and give the Sun's readers the earliest information upon all important events in the legislative and financial centers of the country.

THE FARMER'S PAPER.

The Sun's market reports and commercial columns are complete and reliable, and put the farmer, the merchant and the broker in touch with the markets of Baltimore, Norfolk, Charleston, New York, Chicago, Philadelphia and all other important points in the United States and other countries. All of which the reader gets for one cent.

THE WOMAN'S PAPER.

The Sun is the best type of a newspaper, morally and intellectually. In addition to the news of the day, it publishes the best features that can be presented, such as fashion articles and miscellaneous writings from men and women of note and prominence. It is an educator of the highest character, constantly stimulating to noble ideals in individual and national life.

The Sun is published on Sunday as well as every other day of the week.

By mail the Daily Sun, \$3 a year; including the Sunday Sun, \$4. The Sunday Sun alone, \$1 a year.

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A. S. ABELL COMPANY,
Publishers and Proprietors.
Baltimore, Md.

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That's our claim for the Sure Hatch Incubator, and the way we prove it is to send you, on

60 DAYS TRIAL, FREIGHT PREPAID

any incubator you may select from our entire line, so you can take off two hatches.

Our beautiful catalogue is full of testimonials from men and women in all parts of the United States, telling how much money they make with the "Sure Hatch."


In fact, we couldn't quote all the testimonials, for there wasn't room in the catalogue for all, and we have printed hundreds of them on sheets as big as newspapers.

We will send these along too.

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has progressed with the development of the science of sanitation and we have kept pace with the improvements. Have you? Or is your bathroom one of the old fashioned, unhealthy kind?

If you are still using the "closed in" fixtures of ten years ago, it would be well to remove them and install in their stead, snowy white "Standard" Porcelain Enamelled Ware, of which we have samples displayed in our showroom. Let us quote you prices. Illustrated catalogue free.

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D. M. HILL, Lexington, Va.
North Carolina State College

CLUBBING LIST.

In this list will be found prices on papers, magazines and periodicals which are most called for by our readers. We have club rates with nearly all reputable publications, and will quote them on request:

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	With Alone. S. P.	
Times-Dispatch, Richmond, Va.	\$6 00	\$6 00
Times-Dispatch (without Sunday)	4 00	4 00
News-Leader, Richmond, Va.	3 00	3 00
The Post, Washington, D. C.	6 00	6 00
The Sun, Baltimore, Md.	3 00	3 40

THREE A WEEK.

The World, New York	1 00	1 25
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WEEKLIES.

Times-Dispatch, Richmond, Va.	1 00	1 25
Central Presbyterian, Rich- mond, Va.	2 00	2 25
Religious Herald, Rich- mond, Va.	2 00	2 25
Southern Churchman, Rich- mond, Va.	2 00	2 25
Harper's Weekly	4 00	4 00
Breeders' Gazette	2 00	1 50
Country Gentleman	1 50	1 75
Hoard's Dairyman	1 00	1 30
Horseman	3 00	3 00

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Kimball's Dairy Farmer...	1 00	75
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MONTHLIES.

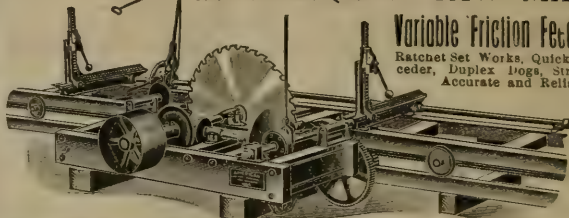
The Century	4 00	4 25
St. Nicholas	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's	3 00	3 25
American	1 00	1 35
Cosmopolitan	1 00	1 35
Everybody's	1 50	1 75
Munsey	1 00	1 35
The Strand	1 00	1 35
Madame	1 00	1 00
Argosy	1 00	1 35
Review of Reviews.....	3 00	3 00
Field and Stream.....	1 50	1 50
Woman's Home Companion	1 00	1 25
Reliable Poultry Journal..	50	75
Industrious Hen	50	70
Poultry Success	1 00	75
Blooded Stock	50	65
Successful Farming	1 00	60
Southern Fruit Grower ..	50	85
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Commercial Poultry	50	75

When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with Southern Planter."

We cannot under any circumstances furnish sample copies of other publications.

We will cheerfully quote our best price on any list of publications submitted to us.

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Variable Friction Feed!

Ratchet Set Works, Quick Re-
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Best Material and Workmanship, LIGHT RUNNING, Requires Little Power, Simple, Easy to Handle, Won't Get Out of Order.

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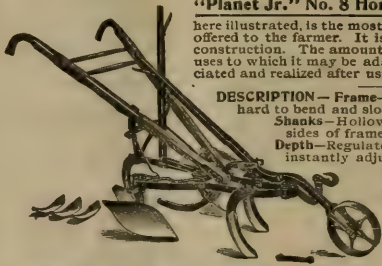
AMERICAN SAW MILL MACHINERY CO., 137 Hope St., Hackensacktown N. J., N. Y., Office 636 Engineering Bld'g. Agents in Richmond, Norfolk, Lynchburg and Wytheville, Va. THE WATT PLOW CO., General Agents, Richmond, Virginia.

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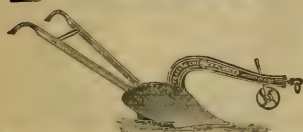
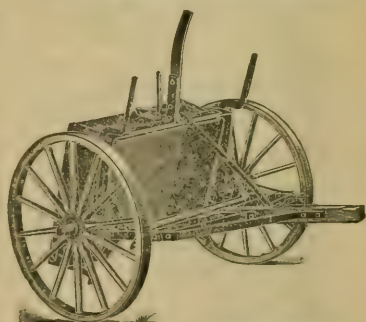
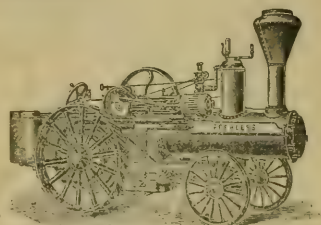
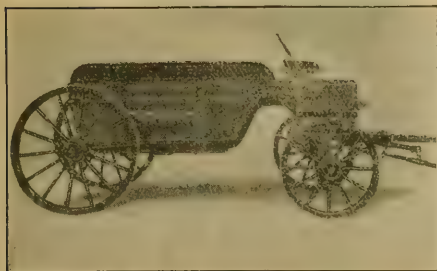
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REPORTS.

United States Department of Agriculture, Washington, D. C. Office of the Secretary. Circular 14. Adulteration of Alfalfa Seed. Names and addresses of seedmen who sold lots found to be adulterated.

Bureau of Annual Industry. Bulletin 77. Cattle, Sheep and Hog feeding in Europe.

Bureau of Entomology. Circular 65. The Cotton Red Spider.

Office of Experiment Stations. Experiment Station Record; Vol. XVII, No. 2.

Office of Experiment Stations. Experiment Station Record; Vol. XVII, No. 3.

Bureau of Forestry. Circular 29. Exhibit of tree planting on a Model Prairie Farm at the Louisiana Purchase Exposition.

Bureau of Forestry. Circular 30. Exhibit of Forest planting in woodlots at the Louisiana Purchase Exposition.

Bureau of Forestry. Circular 31. Exhibit of a Forest Nursery at the Louisiana Purchase Exposition.

Progressive Forestry in the United States.

Forest Extension in the Middle West.

Office of Public Roads. Circular 35. A Study of Rock Decomposition under the action of Water.

Bureau of Soils. Bulletin 27. Experiments in growing Cuban Seed Tobacco in Texas.

Bureau of Soils. Circular 17. Manurial requirement of the Portsmouth Sandy loam of the Darlingmouth Sandy loam of the Darlingmouth area, So. Car.

Bureau of Statistics. Bulletin 35. Imports of Farm and Forest products, 1902-1904, by countries from which consigned.

Bureau of Statistics. Bulletin 38. Crop Export movement and port facilities of the Atlantic and Gulf Coasts.

Farmers' Bulletin 229. The production of good Seed Corn.

Farmers' Bulletin 231. Spraying for Cucumber and Melon diseases.

Farmers' Bulletin 232. Okra, its culture and uses.

Farmers' Bulletin 233. Experiment Station Work. Fertilizers for Asparagus. Onions in the South West. Animal food for Ducks. Cider Vinegar, &c.

Farmers' Bulletin 234. The Guinea fowl and its use as a food.

Farmers' Bulletin 236. Incubation and Incubators.

Colorado Experiment Station, Fort Collins, Col. Bulletin 103. The thorough Tillage System for the plains of Colorado.

Kansas Experiment Station Manhattan, Kansas. Bulletin 130. Steer feeding. Experiment VII, 1903-1904.

Louisiana Experiment Station, Baton

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AND
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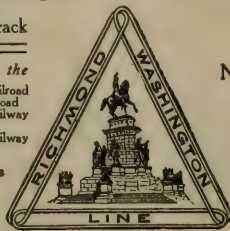
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Between All Points
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